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D. K. MINOR, PROPRIETOR.] **FOR JULY, 1838.** [SAMUEL FLEET, EDITOR.

NEW PUBLICATIONS.

Transactions of the Essex Agricultural Society for 1832. VOL. II. No. 2.

On a former occasion we called the attention of our readers to the transactions of this useful and patriotic association. The present pamphlet of near one hundred pages, contains an Address by the Rev. Gardner B. Perry, Reports on Irrigation, Milch Cows and Heifers, Dairy, Domestic Manufactures, Potatoes, Ploughing, Cider, Animals, Mulberry Trees, Rye, Indian Corn, and Articles on Gardening, and Exact and Experimental Agriculture, with Notes, &c.

The Address of Mr. Perry is characterised by good sense, and contains many useful suggestions. Every person familiar with our agricultural population will be enabled to call to mind many instances corroborative of the following:

"In addition to these advantages, the doings of this Society have a tendency to remove some of the greatest hindrances which lie in the way of agricultural improvement.

"You will permit me to mention some of these.

"The first to which I will refer is *an unsettled state of mind*. This may be more common and operative with other classes than with agriculturists; but it prevails to a most hurtful degree with them. The feelings of many are so unsettled that they may truly be said to be ever on the wing, though during life they never in reality move out of their place. This state of mind is destructive of all enjoyment, for it produces a disrelish for what they now possess, and keeps them from all efficient effort to make a better provision for the future. Those under its paralyzing influence will neither erect their buildings, place their fences, plant their orchards, cultivate their farms, embellish their gardens, or manage any of their principal business, as they would were it not for an undefined *peradventure* that at some time they shall find it for their advantage to sell, and in such case be constrained to sacrifice much of the expense they had been at for improvement. All is done just to answer present exigencies, and in the end, as might be expected, the man has neither the profit or comfort which he might easily have secured, had he, as he ought, never allowed himself in this unsettled state of mind, nor made arrangements to sell till he had determined to do it, nor thought of moving till the openings of Providence made it his duty so to do. After intemperance, and the expensive demands of fashion, there is no one cause which in my apprehension casts such a withering influence over the prosperity of society, as this feeling.—All classes in the community are injured by its unhealthful influence. It extends to those who do not give it a resting place in their own bosoms. Parents, who have no intention to change their own residence, are less anxious to improve their possessions, because of the uncertainty whether their children will retain the inheritance and occupy the farms which are handed down to them. Children, when laboring with their parents, plan with less comprehension, and work with less courage, for, in their hearts at least, they say 'of what advantage will our exertions to improve the place be, should father sell, as we often hear him intimate that it is probable he may.' It discourages noble effort, enterprise and improvement.

"I could direct you to houses which have already ceased to shelter those who still live in them—and to farms with some of the best land untouched, or with fields which once yielded in rich abundance the glories of the year, now grown over with weeds, and with fences broken down—the legitimate consequence of a wandering, unsettled mind. And though some of the proprietors of these may be leaning on their staves for very age, they are just as much unsettled as they were a half century since. I am perfectly aware that this feeling has in a degree diminished in this county, and I hope throughout New-England, within a few years past. But it still continues with a dreadfully withering operation among us. The causes which induced this state of mind are numerous, and it would not be useless or uninteresting to dwell upon some of them. I shall confine myself to a single one, not perhaps the most prominent, but connected directly with the object which I have before me, and operating, though not exclusively, upon the yeomanry of the county. The cause to which I allude rises up in connexion with a fact which I suppose all must allow: that farming has been pursued too much as a mere mechanical operation, while the reasons of each operation have not been sufficiently understood, nor have those engaged in it been sufficiently inquisitive whether other and better ways might not be adopted. The mind being left unoccupied become restless, dissatisfied and hungry, consults new things, goes abroad for its enjoyments, and the whole man set afloat, ready, in fact willing, to be driven about by every trifling circumstance.

"I know nothing which promises more effectually to remove this evil than to diffuse through society more agricultural science, enterprise and taste, to direct the mind to the reason upon which the operations of farming are founded, to induce men to commence plans of distant yet of certain ultimate advantage, to excite to inquiry and investigation, and thus turn farming into a business of the head as well as of the hands; to induce men also to unite in their plans what is beautiful and attracting with what is useful, and thus make their farms, houses and other appendages, pleasant and attracting to the owners; and further, by prevailing with them to take a part in the public efforts which are going on for the general advantage, to accustom them to feel that their interest and comfort are nearly connected with those among whom they dwell, and that it cannot be of little concern whether they continue with them, or for a small or imaginary good break away from all the associations which time and the interchange of kindness and acquaintance have made dear to them. How well suited the plans of your Society are to bring about this desirable change need not be described, nor would it be easy to estimate the advantages which would arise from it could it produce that feeling of filial respect and piety in respect to an inheritance received from their father, exhibited in the following quotation: 'The Lord forbid it me that I should give the inheritance of my fathers to thee.'"

The Author has a very correct idea of the obligations every farmer is under to prevent injurious plants and insects from propagation. He who, from carelessness, allows noxious weeds to ripen and scatter their seeds, is justly chargeable with the violation of the beautiful moral rule, "Do unto others as you would have them do unto you!"—Mr. P. thus speaks:

"A further hindrance to improvement in husbandry is found in the fact, that whatever exertions a man may make to keep his own fields free from insects, noxious plants and whatever is destructive to vegetation, it can be only of partial and temporary advantage, because in the neglected lands of his neighbor a new and unfailing recruit will be reared up every returning season. The field of the slothful will be grown over with thorns, and the face of it covered with nettles. It would be well were there no sluggards in the land, and it would be happy if many who are not sluggards were sufficiently apprised of the advantages which would accrue to themselves and neighbors, did they suffer no noxious weed or devouring insect to find shelter about them. He who suffers his own fields to be filled with hurtful vegetation, or his trees to be devoured by destructive insects, does nothing for which the laws of the land can punish him, nothing for which he would be willing to have his neighbor complain, and yet he is instrumental of doing as great an injury, as if, when his trees were filled with fruit or his fields white for harvest, he should by stealth or force appropriate a part to his own use, or knowingly permit his cattle to devour it. He who prevents my trees from bearing, leaves me as destitute as he who sequesters the ripened crop to himself. There is a moral obligation on this subject which I fear is not felt, responsibilities which are not regarded, injuries permitted for which no compensation is provided, discouragement induced by which the whole community suffers."

Superficial observers often question the utility of agricultural and other similar associations. They are unable to perceive the benefits that flow from their influence. It is not every man that would trace his superior butter and cheese, and his increased attachment to his family and home, to the effects of an agricultural society, which meets perhaps but once a year. Yet such is the fact, and such has Mr. Perry beautifully described it:

"I suppose the females in this country have contributed their full proportion to the interest and usefulness of these exhibitions, and very sure am I that they have derived their full share of advantage from them. I have in several instances been personally acquainted with the good which has by this means been effected.—Increased industry, taste, refinement in manners, and order in the management of domestic concerns, in many families, have been the happy result. Many a man has found his table more genteelly spread, furnished with better butter and cheese, his floors covered with good and substantial and in some instances quite elegant carpets, a handsome rug spread before the fire-place, ornaments upon the mantel-piece, his armed chair furnished with a comfortable cushion, and many other neat and pleasant things, and has ever since loved his wife and daughters and home better, worked with increased animation, felt a generous pride in exhibiting these things to his neighbors and friends when they called, and he is always careful to add that noth-

ing was taken from the granary or stall to foot an *alarming* merchant's bill. They have all sprung up like magic."

As mankind advance in useful knowledge and become more enlightened, they will acquire more enlarged and correct views of the relative importance of things, and more readily trace effects to their true causes:

"I must be permitted to call to recollection the remark, in which at the opening of this address I spoke of the object of this Society as being of a worldly nature. This I did, not because I suppose it has no bearing upon moral and future concerns. I by no means wish to inculcate the sentiment which I fear has too often been inculcated, that the conduct of this world's concerns can ever be separated from the moral condition of the soul or its prospect in a higher or more perfect scene of action. The abstract and subtle discriminations of acute and fine-spun sophistry have left, and must leave, the connexion between the outward conduct and the inward feeling, the business of the present life and the retributions of eternity, unaffected. Assuming therefore in the present case, that the motive is good, and the comparative worth of every part of life justly estimated, how certain it is that, in proportion to the enterprise and diligence and attention to the duties of this world, will be the actual advancement of man in the scale of moral attainments. How certain that institutions like yours, designed to encourage industry, economy, enterprise and carefulness, and which indeed direct the attention to the works and ways of God, and develope the riches of his wisdom and goodness, must have a favorable bearing upon the understanding and the heart. When I commenced this address it was my intention to have dwelt more particularly on this point than I have done. I think it would be both interesting and useful to show how certainly every real improvement in the condition and outward circumstances of men tend to correctness of feeling, elevation of conduct, moral rectitude, benevolent action, and devotional dispositions."

From the report of the Committee on Milch Cows and Heifers we make the following important extract, to which farmers would do well to give attention:

"Capt. Hector Coffin offered, for exhibition only, two handsome heifers of native stock. In his statement, Capt. C. remarks, "I make it a point to bring all my heifers in with their first calves after pasturing time has commenced, so that green fodder may aid in swelling out their young udders; which process, followed for the two or three first years, invariably makes a good milker."

In the report on Cider we find the following encouragement to farmers, to set out apple trees:

"The late Mr. Samuel Thurlow, of West Newbury, was an excellent practical farmer. In early life he commenced setting out apple trees, principally of the russet kind, and in situations the least inconvenient for the cultivation and improvement of the soil. He lived to receive a large annual income from these trees, for many years before his death. It is said that some years he sold apples, principally of the winter kind, to the amount of 1000 dollars. In some towns in this county, cider and apples are annually imported from the South, particularly from Philadelphia and New-York. In this country we may with proper care produce as good apples and make as good cider as are imported from those places, and so long as this is the case, let us rely solely on our own resources. It is to be hoped that this subject will arrest the attention of our farmers, and that we may soon see the good effects of the bounty of this society in the improved state of our orchards, and in the quality of our cider."

Mr. Paul Kent gives the result of his experience in raising the Potato:

"From the above experiments I have come to the conclusion, that as a general rule it is better to plant potatoes under, than over, the manure, and that there is no better way of cultivating them, taking labor into consideration, than by first ploughing the land in ridges 3¼ feet distant from each other, dropping the potatoes at 2¼ feet distance and putting the manure over them, and covering by furrows one on each side."

The article on the cultivation of rye, which we insert in another part of our paper, will be read by farmers with much interest.

Twelve pages are occupied with a truly valuable article on the cultivation of Indian Corn, from the pen of the Rev. H. Colman, whose knowledge of practical farming is conceded to be extensive wherever he is known. We shall give an abstract.

He states that the oldest inhabitants did not remember a more backward spring than that of 1832—that snow fell in the neighborhood of Boston, on the 25th of May, to the depth of two inches—that a severe frost occurred on the night of the 12th of September—that, owing to the weather which followed this late date, corn which was planted the 13th to the 21st of June, ripened well and gave a full return. The average crop of corn in the New-England States is 30 bushels per acre. This small yield Mr. C. considers more profitable than almost any crop that can be put in the ground, requiring the same labor and expense: but that no enterprising farmer should be satisfied with 30 bushels, when there have been raised in the county, 80, 90, 100, 116, and 135 bushels. What has been done can be done again.

"On a visit to an extensive farming establishment in the interior of New-York, and certainly one of the best conducted farms which I have ever visited, the owner, who goes as largely into the cultivation of Indian corn as perhaps any man in the Eastern or Middle States, his produce often amounting to five thousand bushels a year, informed me that his crops for the last ten years had averaged more than one hundred bushels to the acre. His method of cultivation is peculiar; and the best test of its propriety and expediency is its success, he having within a few years more than trebled the amount of his crops. He ploughs to the depth of about three or four inches, taking care to invert the sod completely; he then rolls it so as to exclude the air from the inverted sod; he then spreads about eight loads of manure to the acre, harrowing or ploughing it in to the depth of about an inch; and using the greatest care never to turn over or to break the inverted sod. His corn, which is a small eight rowed-kind, is then planted in hills at the exact distance of 2 feet 8 inches each way, being careful always to use seed enough to secure at least four healthy plants to a hill. It is occasionally, but not always, manured with a small quantity of gypsum or leeched ashes, and harrowed and hoed carefully; but never hilled. His crops are very abundant; and he attributes much of his success to his taking advantage of the fermentation and decay of the inverted sod, which from the quantity of vegetable matter contained in it affords much nutriment to the growing plant, as soon as its roots strike into it."

He recommends an early variety of corn, that can be planted early, and that will ripen before frost, and in time for another crop:

"The kind of land best suited for this crop, I am satisfied, is a green sward, completely inverted, rolled, and so cultivated as not during the whole season to disturb or break the sod, which has been turned over. This is a point of great importance: for the decomposition of the vegetable matter in the ground, which is effectually secured in this way, but entirely lost by the common mode of cultivation, will greatly contribute to the nutriment and vigor of the plant, supplying in fact an amount of manure greatly beyond what any conjectures would have made it, had not an exact experiment determined that in ordinary cases it may be rated over twelve tons of vegetable matter to an acre. In the next place we protest against the practice of very deep ploughing for this crop; and that of burying the manure deeply under the sod. The depth of ploughing may be in some measure regulated by the nature of the soil; but three or four inches in sward land may be regarded as ample; and not so much as this, where this would carry you below the vegetable mould. All circumstances considered, I am satisfied that it is most eligible to spread the manure upon the surface, ploughing it in with a very light plough or harrow; and though something may be lost in this way by evaporation, yet not so much as by burying it under the sod; and the land is left in much better condition for the next crops, where the manure is thus spread, than where it is placed in the hill; nor is the corn so likely to suffer from the drought, and the saving of labor is considerable.

"Of the after cultivation little need be said. Repeated stirring of the ground with a harrow or cultivator is advisable; but care must be taken not to go so deep as to break the roots of the plant. Weeds cannot be too completely kept down; but hilling or half hilling are utterly useless, either for the support of the corn or its productiveness; and high hilling is absolutely pernicious.

"The practice of topping the stalks is to be entirely disapproved. Very exact experiments have demonstrated that it cannot be done but at the expense of about one-fifth of the crop; and for this loss no advantage in the supposed improved condition of the fodder can be any equivalent.

"We come next to speak of the harvesting of the crop, and here I ask leave to detail partially my own experience. The common mode of topping the stalks, and afterwards gathering the corn in the field, and leaving the husks and butts to be browsed by cattle, is improvident and wasteful. The leaving it untopped until it is sufficiently ripe, and then cutting it up at the bottom, allowing it to finish the ripening in the shock, has sometimes with me been attended with success; in some cases, however, it has given me so much mouldy and soft corn as almost to induce me to abandon a method so much recommended by many intelligent farmers, and now, since I have discovered, as I believe, the causes of my failure, most approved by my own judgment.

"The last summer was such an extraordinarily cold summer that corn generally was three weeks behind its usual condition at this season, and fears were entertained that the crop would be entirely cut off. On the 9th of September there was a slight frost, and on the 12th and 13th there were severe frosts. Corn was generally in the milk; and in many places much was killed. The fogs on the river, near to my residence, served as a protection to my crop. Under these threatening appearances, fearing the loss of my whole crop, if delayed, I determined to cut up the whole at the ground as soon as it should be slightly glazed, and the results and facts in relation to it I took pains to record.

"I was curious to determine whether corn in the milk, and not at all glazed, would ripen if cut at this time. Three stalks with one ear on each were cut up in this condition, and placed in as favorable a situation as possible for sun and air. They ripened perfectly, and to appearance became as fair and hard and heavy as any; but the experiment would be a rash one with a whole field, where as favorable an opportunity for curing it could not be obtained.

"I began cutting up my corn on the 14th September, after having previously cut out the suckers and barren stalks. The field, which I took first, was one in which the corn appeared dead; but this was occasioned by the rust, not by the frost. This corn was cut; and without

being laid upon the ground, several hills were brought together, and being spread at bottom, were tied by a single band at the top. Much of this corn upon husking appeared of a pale yellow; and a good deal of it was soft and mouldy. The stooks did not stand firmly; and were frequently overturned by the wind. Perhaps the centre hill, around which the others were gathered, ought not to have been cut until the time of carrying in the corn, as is practised by some persons. The shocks likewise being large and tied at the end were loaded on the cart with difficulty. We attempted to remedy this by dividing the shock, and tying it with straw in moderately sized bundles, before we removed it; but this greatly increased the labor. Upon the whole we entirely disapproved this manner of shocking and tying them.

"Another field, where the corn was slightly glazed and the stalks very green, was cut, tied in small bundles above the ears, and put in small shocks. This corn came out better than the former, but not so well as could be desired. We concluded that it was cut too early and husked too soon, not having remained long enough in the shock.

"Two other fields were necessarily left to a later period, after the corn had become fully glazed; that is, in general, every kernel on an ear well touched, though the stalks were still green and succulent. It was tied very near the top in small bundles, put up in small shocks, and spread at bottom so as to give free access to the air. This corn came out at husking perfectly bright and sound; with less refuse than ordinary; and the fodder was succulent and of the very best quality."

Mr. Colman considers the whole labor of harvesting in this way not as great as the usual practice of topping and curing the stalks, and then cutting the butts, and carrying them into the barn and husking the corn:

"Topping the stalks is a serious injury to the crop and ought to be forever discarded. The best mode of harvesting is by cutting after the corn is glazed; tying in small bundles near the top, and putting it in small shocks upon the ploughed land, and not upon the grass ground. This last is a point of great importance. An intelligent farmer, who has been in the habit for ten years of harvesting his corn in this way, cautioned me by no means to shock it upon grass ground, as the grass would exclude the access of the air to the bottom of the shocks, and the stalks and the corn would become damp and mouldy. This obvious, but before unthought-of circumstance explained my former ill success in some cases, to which I have alluded; for in those cases, as I wished to plough the corn ground, I remembered shocking corn on the grass ground by the side of the field, where the rowen was very luxuriant."

Observations on the Employment of Salt in Agriculture and Horticulture, with Directions for its Application, founded on Practice. By CUTHBERT WILLIAM JOHNSON. Fifth Edition. London, 1827.

In looking abroad into the physical world and seeing every thing capable of being rendered subservient to his wants, man has ever been led to conclude that all were created to promote his happiness. The farmer, taking a survey of the operations of nature, and considering the source whence mankind derive their sustenance, is led to exclaim, "All things were made for me. All that is in the depths of the earth or the sea—all that grows or lives, when in my hands, cause my grain and my grass to grow. Wherever I am, there nature has laid in her stores for me. The rain descends, the sun shines, and the various changes and chemical operations of nature take place, to aid me in my vocation." Among those innumerable substances that cause "two blades of grass to grow where but one grew before," is that of salt. We are indebted for the pamphlet to an intelligent farmer, who imported it from England; and shall proceed to make extracts, which, we are well persuaded, will be read with interest by farmers:

That salt was very early applied as a manure in the East, we have abundant testimony. "Salt," said our Saviour, in one of his addresses to his disciples, "is good; but if the salt have lost its savor, wherewith shall it be seasoned, it is *neither fit for the land nor yet for the dunghill*, but men cast it out."—(St. Luke, chap. 14, verse 34.)

Cato says, "sprinkle your best straw with salt, then to serve it for hay!"

Lord Bacon, who died in 1626, recommends its use for the garden.

Sir Hugh Platt, in 1658, bears testimony to its value for grass lands.

Frederic Hoffman, in 1742, and Dr. Brownrigg, in 1748, celebrated its importance as a condiment for cattle.

The farmers in the neighborhood of Padstow Harbor annually employ nearly 54,000 single-horse cart loads of sea sand, and they are so convinced of the superiority of this salted sand, that they prefer, says Dr. Paris, "sending four or five miles to the shore to obtain this calcareous sand, which has salt in it, although, at much less expense, they might procure drifted sand, which does not contain salt, at their own doors."—(Johnson's Essay on Salt, page 30, second edition.)

WHEAT.—Salt, it should be remembered, *rarely causes the wheat plant to grow larger or taller*, but it fills up the ear better and brings the weaker plants forward. We have it on the authority of Mr. Sinclair, that "salt appears to lessen the produce of straw and increase the weight of grain." I have never been able in my experiments, or any I have witnessed, to see any increased quantity of straw, even in cases where there was an increased produce by means of salt of six bushels of wheat per acre.

I cannot enforce this too much upon the attention of the agriculturist. Let not the farmer be deceived by appearances: let him have the salted and unsalted portions, at harvest time, carefully separated and examined by weight, if the plots are small, or measuring will answer if extensive. A few square rods, or even yards of each, will be sufficient; and I have no hesitation in saying, that he will find the result highly in favor of salt. But if, on the contrary, after having carefully applied salt to *half* of the field, he judges at harvest time merely by his eye, in such an unfortunate case, let me request of him, for his own credit sake, not to mention *his experiments* upon salt manure—how carefully he tried it, and how complete was its failure: let him be assured that such modes of investigation, though very common, are worse than useless to the agriculturist—are marks of obstinacy and presumption, to be excused only on the plea of ignorance.

Let the salt be applied some time before sowing the seed, not less than ten and not more than twenty bushels per acre.

In my own experiments upon a light gravelly soil, at Great Totham, in Essex, the use of twenty bushels of salt per acre, (in 1819,) produced an increase of 5½ bushels per acre.

The following statement of the result of some trials in 1820 will show how important may be the result to the country at large, by its judicious application. I regret that incessant employment of a very different nature has hitherto prevented my continuing these experiments.

		Produce per acre. bhls.	lbs.
No. 1.	Soil without any manure, for four years,	13	26
2.	Soil manured with stable dung to the previous crop (potatoes)	26	52
3.	Soil with five bushels of salt per acre, and no other manure for four years,	26	12

The soil light and gravelly.

The testimony of a plain Essex farmer may have some weight in corroboration of my own, even with the most suspicious. "The soil," says Mr. James Challis, of Penfield, "that I described to you to be of rather a loose hollow description, had a dressing of salt put on in November, after the wheat was sown, about 14 or 15 bushels per acre: it produced at the rate of six bushels per acre more than that which was not dressed, and it may be stated to be £1 per load of 40 bushels better in quality."

Another Essex farmer, the late Mr. Baynes, of Heybridge, had his doubts removed by the result of the following experiment—the soil "a sandy clay":

Produce in bushels per acre:

Soil dressed with 15 loads of stable dung per acre, ... 17½

Soil dressed with 14 bushels of salt per acre, immediately after the seed was sown, ... 36½

It is a custom in most counties of England to apply salt and water as a steep to prevent the ravages of the disease in wheat, called smut: the value of this is known to almost every farmer. Recent experiments have suggested that it may even be of use, when employed in larger quantities, as a preventive of mildew—the most dreadful of the numerous diseases to which the cultivated grasses are exposed. The experiments of the late Rev. E. Cartwright strongly evidence, that when salt and water is sprinkled with a brush upon the diseased plants, it is actually a complete *cure*, even in apparently the most desperate cases. (See Essay on Salt, page 49.)

"The proportion, one pound to a gallon of water, laid on with a plasterer's brush, the operator making his casts as when sowing corn: it is instant death to the fungus." The time and expense is trifling.

It appeared in the course of some inquiries made by the Board of Agriculture, that a Cornish farmer, Mr. Sickler, and also the Rev. R. Hoblyn, were accustomed to employ refuse salt as a manure, and that their *crops were never infected with the rust or blight.*

BARLEY AND OATS.—Apply from ten to sixteen bushels per acre just before you sow the seed.

Mr. Legrand, a Lancashire farmer, states, "in a sandy soil I can assert sixteen bushels to be a proper quantity for a statute acre; it gradually advanced in its beneficial effects to sixteen bushels, and as gradually diminished to forty bushels where vegetation was stopped."

A Suffolk farmer, Mr. Ransom, of Sproughton, also says, when speaking of his experiments on a light sandy soil, "The Barley thus dressed, *presented no difference of appearance to the rest of the field*, until within a fortnight of harvest; the salted crop was then brighter and about one week forwarder than the rest of the field." The following are the results when carefully cut and measured—

Produce in bushels per acre:

Soil without any manure, ... 30

Soil dressed with 16 bushels of salt per acre, in March, ... 51

TURNIPS, MANGEL WURTZEL, &c.—I select from my latest communications the following from Killerton, in Devonshire. In a letter, dated August 26, 1826, Sir Thomas Acland, Bart. favored me with the following statement from his bailiff: "The first experiments I made of salt for manure was on seven acres of land for mangel wurtzel. I first heaped out the field with earth, forty heaps to an acre, as is usually done for lime: I then put in each heap thirty-three pounds of salt, and mixt it well with the earth, and let it lie a fortnight before I spread it over the land, after that I ploughed the land three times before I sowed the seed, and I had roots there 32 pounds each. Since that time I prepared a field of five acres in the same way for turnips, one-third part of the field with lime, one-third with salt, and the other part with hearth ashes. When the seed came up first, the turnip appeared most promising where the hearth ashes were; but after the first month,

the turnips did not grow so fast as where the salt or lime was; after that time, the turnips, where the ground was manured with salt, grew faster, and the green looked stronger and darker, and at the end of the season was the best crop.

"The next year I put the field to barley; and where the salt was put, it was the strongest and best crop. After that time it was a great deal heavier to work; therefore, I consider it a good manure for light sandy soils, but not calculated for clay or heavy lands."

Mr. Hare, of Beaconsfield, in Buckinghamshire, uses salt regularly. In 1822, on one acre of a large field—the soil very gravelly—he applied about 2 cwt. of salt, without any other manure; the rest of the field was manured as usual. The turnips produced on the salted acre were just as good as on any other part of the field. In the following year, on another field of the same quality, he manured the *whole* field with farm-yard manure, adding to one acre of the field 2¼ cwt. of powdered rock salt. On this *salted* and *manured* acre, he had more and finer turnips than was produced on any other field of equal extent in the whole parish. He approves of it also very decidedly for barley.

GRASS LANDS.—Apply ten or fifteen bushels per acre in the autumn.

I rejoice to find that in Devonshire salt has found, in Mr. Collyns, of Kenton, an able and zealous advocate. From a letter dated October 17th, 1826, with which I was favored by that gentleman, I make the following copious extract:

"One of my neighbors writes me, in using salt as a manure on grass, land: 'I have found the salted portions not to be affected by severe frosty nights, when every blade of grass on the unsalted portions has been in a frozen state.

"'I observe, too, that it is destructive to every kind of grub and worm; and I am convinced, where it has been used with judgment, that it has not failed.' Another intelligent neighbor, continues Mr. Collyns, whose farm is almost entirely a light black sand, writes—'I have found salt answer my most sanguine expectations for barley, oats, potatoes, and turnips, both as to the increased quantity and improved quality of the crops, of which I can now give occular demonstration to any one you will send: my barley and oats, which used to yield me only 15 to 20 bushels per acre, now yield from 40 to 45. My wheat is certainly much improved in quality, but I expected more in quantity. I have had 35 bushels of wheat from an acre dressed with ten bushels of salt; and from the same field last year, after the same quantity of salt, 140 bags of potatoes per acre. This year again, dressed with ten bushels of salt, I have not more than 20 bushels of wheat per acre, but the quality very superior indeed, and the root of clover in it is very fine and luxuriant. In every field I have salted, I find the grass very much superior to any produced before the use of salt.'

"I have since," adds Mr. Collyns, "gone over his farm, and am astonished at the verdant pasturage, in what used to be coarse and rushy meadows. In this arable land he never got more than ten bushels of wheat per acre, until he used salt; so that this is also a decided improvement."

I will give but one other testimony in favor of its use, and that one of the latest I have received from an old Suffolk agriculturist, Mr. Brooke, of Capel, near Ipswich:

In the month of April, 1821, six bushels of salt manure were applied to half an acre of red clover—the soil good turnip land, not sharp; extent of the field ten acres. The salted clover at first looked very yellow, and apparently injured, but it soon began to recover; and when mown, the increased produce was, at the very least, 10 cwt. per acre; and the aftermath proportionately good, the cattle eating it down closer, and in preference to every other part of the field.

POTATOES.—Apply from ten to twenty bushels of salt to the surface as soon as the potatoes are planted, or ten bushels in the previous autumn, and ten after inserting the sets.

My experiment with salt to potatoes were upon a light gravelly soil. The result was as follows:

Produce in bushels per acre:

1. Soil without any manure, . .	120
2. Soil manured with 20 bushels of salt the previous September, . .	192
3. Soil manured with stable-dung at the time of planting, . .	219
4. Soil manured with stable-dung and 20 bushels of salt, . . .	234
5. Soil manured with 40 bushels of salt alone, 20 in September and 20 in the spring, after the sets were planted, ...	192½
6. Soil manured with 40 bushels of salt, as in the last experiment, and also with stable-dung, . . .	244

These experiments are entirely confirmed by those of the Rev. E. Cartwright, of Tonbridge. From a copious table which the farmer will find at page 82 of my Essay on Salt, I extract the following statement:

Produce in bushels per acre:

1. Soil without any manure, . .	157
2. Soil manured with 9 bushels of salt per acre, ...	198
3. Soil manured with 8 bushels of salt and 30 bushels of soot per acre,	240
4. Soil manured with 30 bushels of soot per acre, ...	182

"Of ten different manures," concludes Mr. Cartwright, "most of which are of known and acknowledged efficacy, salt, with one exception, is superior to them all."

HAY.—Put about half a bushel of salt to every load of hay, spread it by hand or through a sieve. Mr. Woods, of Ingatestone, in Essex, has employed it for thirty years; his plain unvarnished statement need not be supported by any other.

"I use about a quarter of a peck at each laying, thinly spread, which I find is about four bushels to a stack of 20 loads. I am fully satisfied that double the quantity would be much better.

"In a particular wet season, a few years since, I used twelve bushels to a stack of forty loads, the whole of which was consumed by my own horses, and I never had them in a better condition. I am so fully convinced of the benefit of salt to hay, that, while it is allowed duty free, I shall use it in all seasons." (For other testimonials to the same effect, see Essay on Salt. p. 100.)

The avidity with which animals consume salted hay is not so generally known as it ought; I will give, therefore, a curious fact, related to me a short time since by Mr. Lawe, of Reading.

Mr. Green, of Wargrave, in Berkshire, had, in the season of 1824, a parcel of sour rushy hay, from a meadow on the banks of the Thames, which both he and his men despaired of rendering of the least value; it was, therefore, stacked by itself, and well salted: the quantity supplied was large, but Mr. Lawe did not know the exact proportion.

When the period arrived that his sheep wanted a supply of hay, he directed his shepherd to use the salted inferior hay first, and to his surprise the sheep consumed it with the greatest avidity. The stack being finished, the shepherd was directed to supply them now with the best hay he could find of other stacks of fine meadow hay.

He came, however, the next morning to his master, and made the following remark: "We, sir, must have made a great mistake, and forgotten which stack we salted, for our sheep will not eat the hay which we think the best."

LIVE STOCK.—The importance of salt to animals is so generally admitted, even by those who deny its value as a manure, that I shall not here dwell at great length upon it. When animals are in a wild state, it is observed, that at certain periods of the year they seek the salt water, or salt springs inland, with great avidity; and every farmer observes, that his cattle, horses, &c., are remarkably fond of licking the salt earth of the farm-yard, stables, &c.; and in Spain, they give their sheep salt with great regularity, 128 lbs. in five months to one thousand sheep: as such, I fearlessly assert, that the importance of salt for cattle is incontrovertibly established, however imperfectly it may be practised. I subjoin the statement of Mr. Curwen, M. P. for Cumberland. He has employed salt to his live stock daily for years:

For Horses he gives .	6 oz.	per day
Milch Cows . .	4	ditto.
Feeding Oxen . .	6	ditto.
Yearlings . .	3	ditto.
Calves . . .	1	ditto.
Sheep . .	2 to 4	per week.

If on dry pastures; but if they are feeding on turnips or oles, then they should have it without stint.

Some give it to live stock on a slate or stone—some lay lumps of it in the cribs or mangers. There is every reason to believe that if it was regularly given to sheep, they would be rarely affected with the rot.

Mr. Butcher, now of Brook Hall, in Essex, for years employed salt for his cattle and sheep, on his farm near Burnham, in Norfolk. One of his fields was so very unfavorable for sheep, that, before he used salt, he has lost ten and twelve sheep in a night, when feeding on the turnips; but after he adopted salt, he never lost one. He used to let the sheep have the salt without stint; and he remarked, that the *sheep* always consumed four times the salt *on this particular field*, than when feeding on any other on the farm.

Mr. Butcher one year let this field of turnips to a neighbor, who did not use salt; and consequently, after losing ten sheep the first night, gave up the field in despair.

Sir Jacob Astley, of Melton Constable, in Norfolk, gives about a table-spoon full of salt per week to each of his fox-hounds—it keeps away distempers, and preserves them in the best health and vigor. It is administered wrapped up in paper as a bolus.

HORTICULTURE.—In the garden, much good may be effected by a judicious employment of common salt. I am indebted to my brother, Mr. George Johnson, for several important experiments with salt, in the kitchen garden; they were made with much care, and I can vouch for their correctness.

The soil was sandy; and I abridge from his paper, read before the London Horticultural Society, in November, 1821, the following detail of the result:

WINDSOR BEANS.—Produce in bushels per acre:

1. Soil without any manure, . .	135½
2. Soil dressed with 20 bushels of salt per acre, week before seed time,	217

ONIONS.—Produce per acre:

	tons.	cwts.	qrs.	lbs.
1. Soil manured with 20 bushels of salt and 10 tons of farm-yard manure, .	3	12	3	12
2. Soil manured with 12 tons of farm-yard manure, .	2	10	2	19

CARROTS.—Produce per acre:

	tons.	cwts.	qrs.	lbs.
1. Soil manured with 20 bushels of salt and 20 tons of manure, . . .	23	6	1	18
2. Soil, 20 tons manure only,	22	18	0	26
3. Soil manured with 20 bushels of salt only, . .	18	2	0	0
4. Soil without any manure,	13	4	0	0

PARSNIPS.—Produce per acre:

	tons.	cwt.
1. Yard manure 20 tons, salt 20 bushels, ...	6	15
2. Yard manure, 20 tons, . .	6	11

EARLY POTATOES.—Produce per acre:

	bushels.
1. Soil without any manure, . .	306

2. Soil manured with 20 bushels of salt per acre, ... 584

I have, in my Essay, given at length the experiments of Dr. Priestly, upon various plants vegetating in salt and water. He found that the use of salt materially protracted the existence of the plant. Flowers, kept in water vases, continue much longer in bloom, if a portion of salt is added to the water. It is a common custom with the importers of exotic plants, to dip cuttings into salt water. Before the adoption of this plan, they almost invariably perished in the passage.

To explain these curious facts, it is supposed that the salt acts as a stimulant to the plant. The word stimulant, however, being merely used for want of a better, as most of the amazing processes and wondrous phenomena of vegetable life are too inscrutable but for the eye of Him

"Who spoke the word, and Nature moved complete."

Among my very last letters received on the use of salt in the cultivation of plants, was one from an eminent florist, near Paddington, Mr. Thomas Hogg, and I will here transcribe his own words:

"From the few experiments that I have tried with salt as a garden manure, I am fully prepared to bear testimony to its usefulness. In a treatise upon flowers, published about six years since, I remarked that the application of salt, and its utility as a manure, was yet imperfectly understood. It is a matter of uncertainty, whether it acts directly as a manure, or only as a kind of spice or seasoning, thereby rendering the soil a more palatable food for plants.

"The idea that first suggested itself, to my mind, arose from contempiating the successful cultivation of hyacinths in Holland. This root, though not indigenous to the country, may be said to be completely naturalized in the neighborhood of Hærlem, where it grows luxuriantly in a deep sandy alluvial soil; yet one great cause of its free growth, I considered, was owing to the saline atmosphere; this induced me to mix salt in the compost, and I am satisfied that no Hyacinths will grow well at a distance from the sea without it. I am also of opinion that the numerous bulbous tribe of Amaryllises, especially those from the Cape of Good Hope; Ixias, Alliums, which include Onions, Garlic, Shalots, &c.; Anemonies; various species of the Lily; Antholyza; Colchicum; Crinum; Cyclamens; Narcissus; Iris; Gladiolus; Ranunculus; Scilla, and many others, should either have salt or sea sand in the mould used for them.

"I invariably use salt as an ingredient in my compost for Carnations: a plant, which, like wheat, requires substantial soil, and all the strength and heat of the summer, to bring it to perfection; and I believe I might say, without boasting, that few excel me in blooming that flower.

"If I wished to refresh and improve a soil of what is called an old worn-out garden, exhausted by fifty years' cropping or more, I would give it (½ or ¼ part at a time) a good dressing of lime in the autumn, spreading it as soon as it was slacked, and forking it in immediately. I would, a week or two after that, dig and trench it well in the rough, and lay it up for the frost to act upon; and then in the spring I would give it a good dressing of salt, (not less than six bushels to an acre.) The good effect of such treatment would be manifest for two or three years after."

Palm Leaf Hats.—This manufacture has become a business of considerable importance—a friend in Massachusetts writes, "more than a million of Palm Leaf Hats have been made the past season."

Formerly our supply was obtained from Cuba, and sold from 1¾ to 3 dollars each; we now import the palm leaf, and the hats are sold at about $2 per dozen. These hats are also manufactured in Connecticut, Vermont, &c. &c.

Lansingburgh, July, 1833.

ORIGINAL COMMUNICATIONS.

The following account of the exhibitions of the *New-York Horticultural Society*, on the 15th of May and 6th of June, will, undoubtedly, be interesting to the lovers of flowers. We shall take pleasure in laying regularly before our readers, hereafter, the proceedings of the Horticultural Society, believing that such a course cannot but be agreeable to them. We are obliged, however, in consequence of the late period at which the proceedings of their last meetings were received, to omit most of the proceedings of the Inspecting Committee for June, yet we cannot pass over those of the 25th, the regular monthly meeting, at which there was a fine display of choice and beautiful flowers, particularly from the grounds of the late W. Wilson, and from Mrs. Parmentier. We also publish, with much pleasure, the annexed letter from Alexander Walsh, Esq. of Lansingburgh, and would call attention particularly to that part of it which relates to a suitable burying ground in the vicinity of this city. It is a subject well worthy of serious and immediate attention. It has already been acted upon by the Boston Horticultural Society, whose plan has been followed by several cities in Europe.

We have now before us a Lithographic Print of the *Mount Auburn Cemetery*, near Boston, which covers about 120 acres, beautifully diversified by hills and dales, and lakes and islands—and shall, in our next number, give an engraving, with a more particular description of it.

NEW-YORK HORTICULTURAL SOCIETY.

The following is a list of articles contributed to an Exhibition of Plants, Flowers, &c. held by the New-York Horticultural Society, in Niblo's Saloon, on the 15th of May, 1833, with the Names of the Contributors:

Mr. Wm. Neale, to whom the First Silver Medal was awarded—

150 varieties of beautiful Tulips
1 Daphne Odorata, fol. var. very fine
1 Jasminum Revolutum, very fine
1 Sweet Bay
1 Aucuba Japonica
1 Myrtle
1 Rhododendron Ponticum
1 Magnolia Grandiflora
1 Pittosporum Tobira
6 Varieties of Violets, very beautiful; and several Boquets.
A fine bunch of Blanched Rhubarb.

Charles Oakley, Esq. to whom the Second Gold Medal was awarded—

Nearly 200 Plants, among which were the following:
Aucuba Japonica
Jasminum Revolutum, very fine
Graphalium sps.
Amaryllis Johnsonii, beautiful
Agapanthus Umbellatus
Erica Baccans, very fine
" sps.
Three sps. of Mesembryanthemum
Cactus Flagelliformis, very fine specimen
" speciosus, do.
Diosma Alba
Mellaleuca sps.
8 Geranium Micranthon, beautiful
12 Prince Regent Geraniums
Calla Ethiopica
Phlomis Fruticosa
Pittosporum Undulatum, very large Plant
" Tobira, do.
Eupatorium sps.
Calceolaria Rugosa
Cupressus Juniperoides
Cassia sps.
Acacia Armata
Ardisia Crenata
Mimulus Muscosus
Rosa Elongata, beautiful
Fuchsia Coccinea
Gardenia Florida, very fine
Oleander Nerium Splendens Pleno
Rosa Splendens, } beautiful varieties
" Belle de Monza }
" Champney's Cluster }
" Florence Tea }
Rhododendron Ponticum
Phillyrea, fol. var. very handsome
Salvia Splendens, fine Plant
Illicium Japonicum
Myrtle leaved Orange
Eugenia Floribunda, fine specimen
Hakea Dactyloides
Salvia sps.
Double Pomegranate
Sago Palm
Several fine large Lemon Trees, and a large quantity of Cut Flowers, some of which were very beautiful, Camellia Myrtifolia, in particular.

Miss Pardow—

The following new and choice Geraniums, imported from England, all of which were very handsome:
London Basilisk Scarlet
Princess Augusta
Wilmurianum
Denis' Flagrans
Russellianum
Man of Ross
Recurvifolium
New Duchess of Gloucester
Anna Boleyn
Calaminstratum
And two very fine Seedlings.

Mr. Thomas Hogg, to whom the First Gold Medal was awarded—

Nearly 250 Plants among which were the following, some of them being very rare and choice:
Eucalyptus Pulvissuc, rare
Cactus Speciosus, beautiful
Acacia Lopantha
" Armata
Euphorbia sps.
Arundo Donax, beautiful
Eupatorium, sps.
Stylidium Fruticosum } curious
" Adnatum }
Acacia Pulchella
" sps.
" Suaveolens
" Verticillata
Ruellia Sabina
" Formosa, handsome
Cushion Aloe } curious
Pearl " }
Cassia Lutea
Dionea Muscipula, curious
Aucuba Japonica
Calathamnus Quadrifida
Polygala Speciosa } beautiful
" Myrtifolia }
Hibbertia Volubilis
Hakea sps.
Eugenia Jambos
Indigofera Cytisoides
" sps.
Jasminum Revolutum
Agapanthus Umbellatus, fol. var.
Nandina Domestica
Rhododendron Ponticum
Kennedia, two sps., handsome
Begonia Evansiana
Callicoma Serrata
Senecio Elegans Pleno
Phyllica Plumosa
Cactus Flagelliformis, beautiful
" Longii
" two very curious sps.
Asclepias Currisavica } very handsome
" Salicifolia }
Mespilus Japonica
Gnaphalium sps.
Podylaria Sericea, curious

Rosa Odorata
Cistus, sps. nova
Bonapartia Juncea, rare
Pittosporum Undulatum
Cymbidium Hyacinthinum
Gordonia Lasianthus
Pomaderis Apetala
" sps.
Viburnum Tinus Lucidum
Virgillia Capensis
Banksia Grandis
" Latifolia
Houstonia Coccinea
Illicium Japonicum
Echium Candicum
Melianthus Majus
Dolichos Lignosus, handsome
Equisetum, two sps.
Ardisia Elegans
Astor Argophyllus
Saracena Lutea
Magnolia Soulangiana
Dracena Australis
Ficus Flastica
Cheiriostemon Plataniodes, rare
Magnolia Grandiflora
Camellia, single Red
Craetagus Glabra
Lophospermum Erubescens, beautiful
Sparaxis, three sps.
Mimulus Luteus, handsome
Ficus Nitida
Aristea Cyanea
Erpetion Reneforme
Streptocarpus Rhexii, handsome
Mimosa Latispinosa
Epacris Grandiflora, beautiful
Also, the following Geraniums, several of which are very splendid, and lately imported from England:
Palkii
Reuben Apsley, beautiful
Poculifolium
Hammattti
Admiral Codrington, very large flowers
Urbanum
Brown's Lady Gore
Speculum, very large flowers
Rubinum
Juliet
Hosackia
Quercifolium Superbum
Youngii
Decora
Glorianum
Blakeanum
Micranthon
Fastuosum
Feronia
Belle Gabrielle, very fine
Hetromallum
Rotundilobum
Ursinum
Translucens
Involucratum Superbum, large flowers
Cucullatum Majus, beautiful
Lady Nugent
Ardens
And a great quantity of Cut Flowers.

Mrs. Parmentier, to whom the First Silver Medal was awarded—
A very great variety (upwards of 70) of beautiful Flowers, consisting in par of the following
Lonicera Flexuosa
" Fraseri
Glycine Fruticosa
Delphinium Ajacis, v. pleno
Pæonia Humei
" Whitleji
" Fragrans
Iris Orientalis
" Prismatica
" Pseudo Acorus
Podylaria Australis
Craetagus Latifolia
Spirea Philapendula pleno
" Rosea
" Trifoliata
Two beautiful Pinks, raised from seed by the late Mr. Parmentier, one called the Glory of New-York, and a beautiful Anterrhinum Tricolor
Roses—Tuscany, Transparent, Cabbage, King of Rome, Incomparable Crimson, Duc de Bordeaux, Henri IV., Beautiful Nadiska, La Royale, Ne Plus Ultra, Unique, Belle Aurore, Grand Conde, King of Hungary, Agathe Royale, Imperial Ranunculus, Tour de Monde, Clorinda, Baroness de Stael, Belle Auguste, Temple of Apollo, Agnes Maxwell and Margaritta, raised by the late Mr. Parmentier, Chateaubriand, raised by Mr. L. Parmentier, of Belgium.
The following very choice Plants:
Magnolia Conspicua
Elichrysum Filiforme, beautiful
Gnaphalium Grandiflorum
Rosa Stellata
" Odoratissima
" Corymbosa, sps. nova
" Belle de Monza
" Belle Chinoise
" Pompone
" Compton's Tea Rose
} all beautiful varieties
Verbena Aubletia, beautiful
Epidendron sps., curious
Geraniums—
Parmenterii
Hosackia
Van Rensselaerii
} Seedlings raised by the late Mr. Parmentier
Collinsea Grandiflora
Adenandra Uniflora, curious
Erica Baccans
Citrus Ponzinum, a Lemon with fruit as large as a child's head
Also, a large collection of Cut Flowers, which were very beautiful, and chiefly from rare and choice shrubs and trees

N. G. Carnes, Esq. (Gardener, *Edward Codling*,) to whom the Second Silver Medal was awarded—
1 Rhododendron Ponticum
1 Echium Candicum
1 Strelitzia Reginae
1 Amaryllis Johnsonii
} all in bloom, and very beautiful

Mr. Thomas Dunlap, to whom the Second Silver Medal was awarded—
1 Camellia Mutabilis
1 Ficus Elastica
1 Cactus Speciosus
1 " Flagelliformis
} beautiful specimens.
3 Boquets of Flowers
4 Heads of Lettuce from the open air

T. A. Emmet, Esq. (Gardener, *Mr. Cunningham*,)—
2 Schizanthus Pinnatus
1 Mignionette
1 Stock Gilly
1 Scarlet Geranium
2 Carnations, in bloom
1 Rose Bush
1 Boquet of Flowers

Mr. Nathaniel Dick, Gardener to *James Chesterman, Esq.*—
2 Rose Bushes
2 Carnations, in bloom
1 Diosma Alba
1 Geranium
1 Boquet
2 qts. Early Peas, grown in the open air

J. Brown, Esq. Brooklyn—
1 Boquet, in which were 2 Dahlia flowers

J. K. Hamilton, Esq.—
1 Rhododendron Ponticum
1 Cymbidium Hyacinthinum
} very fine

Mr. James Church—
2 Carnations in bloom
1 Dwarf Apple
1 Candy Tuft

Mr. Michael Floy—
1 Metrosideros Lanceolata
1 Boquet
} Very fine

Mr. Thos. Kinnersley, to whom the Second Silver Medal was awarded—
2 beautiful Stock Gilly Flowers
1 Boquet, and a quantity of Tulips

Alexander Knox, Esq.—
A large Boquet

Messrs. G. Thorburn & Sons, to whom the Second Silver Medal was awarded—
A quantity of Tulips, very beatiful

Messrs. Rushton & Aspinwall—
1 Maranta or Arrow Root

John Hitchcock, Esq.
A Boquet of Tulips

Mrs. Jucho—
1 China Rose Bush

Mrs. Roome—
A fine large Prince Regent Geranium
1 Mesembryanthemum

Mr. Connor, Gardener to — *Holbrook, Esq.* Hyde Park, by *Mrs. Parish*—
A beautiful Boquet

June 6th, 1833.

The following Flowers were presented to the New-York Horticultural Society, at Niblo's Garden—

T. Bridgeman, Union Place—
Several rich Boquets, embracing about fifty varieties of Roses, and other flowers

J. K. Hamilton—
Seven Boquets, consisting of Lonicera Flexuosa, a Chinese Sweet Honeysuckle, Double red Sweet Briar, Royal Provence Rose, Double blush Sweet Briar, Chinese Provence, Le Berceau, and Blush Moss Rose.

Mrs. ———, Lafayette Place—
One large Boquet, embracing a large variety of very beautiful Flowers.

Wm. Neale—
A branch of the Noisette Rose, very richly laden with flowers; three beautiful Boquets of Roses, one Boquet consisting of Delphinium Grandiflorum, Viola Grandiflora, Male Pink, and Dwarf White Phlox; also, two plates of very fine Strawberries, Keene's Seedling and Wilmot's Superb.

From *J. J. Palmer, Esq.* of Washington Square—
A beautiful collection of Roses, embracing many varieties, also Pæonia Fragrans, Scarlet Anterrhinum, &c.

From *Mrs. David Johnson*, Flatbush, L. I.—
8 Boquets of Flowers, consisting of a beautiful collection of Roses, Spirea Lobata, Honeysuckle, Linaria, Syringo, Mallow, Feathered Hyacinth, Viola Tricolor, Oriental Poppy, Solomon's Seal, Centauria, Scarlet Lychnis, Phlox, Orange Lily, Ranunculas and Robinia.

N. Dick, Gardener to *James Chesterman*, Harlaem—
3 large Boquets, consisting of a fine variety of Roses, Honeysuckles, Geraniums, Sweet Williams, Viola Tricolor, Veronicas, &c.

Mr. Kinnersley, 8th Avenue—
Several very beautiful Boquets, consisting of a handsome variety of Roses, Pæonias, White Rosea, &c. very fine, Scarlet Geranium blooms, Stock Gillies, Ligustrum Vulgaris, &c.

From *Mr. Hyslop*, Gardener to *N. Prime, Esq.* Hurl-Gate—
A very large and very splendid collection of Roses, and numerous other flowers formed into one elegant Boquet, and a second very large and handsome Boquet, tastefully and beautifully arranged.

From *Mr. J. Hitchcock*, Bond street—
9 Boquets of very beautiful Roses, and other flowers.

From *Mrs. Thomas Addis Emmet*—
4 splendid Boquets of Roses and other Flowers, embracing a large variety.

From a *Lady*, by *Mr. Joseph Lee*—
2 Specimens of Mountain Cabbage, and 2 Specimens of Cocoa, one of which out of fruit and flower, and one unexpanded, from St. Croix.

From *Alexander Knox*, Greenwich—
12 varieties of Pinks, 5 varieties of Ranun-

culas, and a large Boquet consisting of Pæonias, Roses, Larkspurs, Valerians, Phloxes.

From *Mr. Floy*—
A great variety of Seedling Roses, also Philadelphus Grandiflorus, Caprifolum Pubescens, Yellow and Scarlet Honeysuckles, Lonicera Flexuosa, Magnolia Glauca, Pæonia Humeia, Paonia Whitlejia, Pæonia Fragrans, also a plant in flower of the Cactus Speciosissimus.

From *Mr. C. Oakley*—
3 plates of Strawberries, each very beautiful, viz. Methven's Scarlet, white Strawberry from Connecticut, Seedling do. from plants two years old, 26 Boquets of Roses and other flowers, of rare and beautiful varieties.

From the Grounds of the late *Wm. Wilson*, deceased—
A very handsome Boquet, arranged by Mr. Oakley, consisting of Pæonia Humeia, Digitalis Purpuria, Veronica Chamædrys, Delphinium Intermedium, Iris Xiphium, Viburnum Dentate, &c. also a great variety of choice and beautiful roses and other flowers.

From *Mr. Dunlap*, Bloomingdale—
A very beautiful wreath, composed of a great variety of Roses, Geraniums, Pinks, and other flowers, arranged with much taste and skill, and a very handsome Boquet of beautiful flowers of many varieties and colors.

From *Mr. Wm. Cunningham*, from the garden of *Mr. T. A. Emmet*—
A very beautiful Boquet of Roses, and other flowers.

From *Mr. Hogg*—
A very large collection of Roses, Pæonias, and several fine Boquets, consisting of Campanula Grandiflora, Penstemon Digitalis, Penstemon Diffusa, Spirea Philapendula Pleno, Delphinium Elateum, Delphinium Grandiflorum Pleno, Allium Molle, Chelone Barbata, Amaryllis Formosissima, Lysimachia Verticillata, different sps. of Iris, Verbena Pinnatifida, Verbena Chaemaedrifolia, different sps. of Honeysuckles, Syringo Inodorus, Digitalis Lanata; also, the following Geraniums—Princess Augusta, Franklinii, Brown's Lady Gore, Navarino, Poculifolium, Yeatmanianum, Admiral Codrington, Speculum, Daveyanum, Reuben Apsley, and some fine Seedlings; and several other fine Herbaceous and Greenhouse Plants.

From *Dr. Ireland*—
Three handsome Boquets, containing several varieties of Delphiniums Tradescentias, beautiful Moss and other Roses.

June 25, 1833.

After the business of the regular monthly meeting was concluded, the Inspecting Committee organized, and examined the following articles:

Charles Oakley, Esq.—
presented a splendid Boquet of beautiful flowers.

W. E. Wilmerding, Esq.—
A Boquet, containing Lychnis Chalcedonica, flo. plena
Cactus Speciosissima
Rhus Cotinus, and other flowers

From the grounds of the late *Mr. Wilson*—
A beautiful large Boquet

Mr. Thomas Hogg—
Dahlias, Theodore Twiner's shaded seedling
Spirea Lobata
Campanula Grandiflora
" Urtiafolia
Delphinium
Digitalis Alba
Penstemon Digitalis
" Atrapurpurea
Rosa Microphyllia, and a variety of other flowers

Mr. Keeler—
A Boquet

Mr. Floy—
Rosa Grevillii, with 14 flowers on one stem

Mrs. Parmentier,—
A beautiful Boquet, containing ninety varieties of flowers
Hydrangea Quercifolia
Lythrum Salicaria
Potentilla Atrapurpurea
Mimulus Moschatus
A quart of Dutch Red Currants, very fine

Adjourned.

Was read, and ordered to be published, the following interesting, and, if its suggestions shall be carried into practice, important letter from Alexander Walsh, Esq. to the Horticultural Society of this city. The enterprizing citizens of New-York will not let the present opportunity of obtaining a suitable place to consign their departed friends pass unimproved.

Lansingburgh, June 10, 1833.

Gentlemen,—I have your kind letter of last month, informing me that I have been elected an honorary member of the New-York Horticultural Society.

In the objects embraced by your society, with several members of which I have the pleasure of a personal acquaintance, I feel a deep interest, and will gladly contribute whatever may be in my power to promote its views.

Your society is, I believe, the first of its description instituted in the United States. I trust it will continue to maintain a first rank in usefulness; it has certainly at present attached to it many of the most skilful florists in our country. The numerous benefits it has conferred on the State, its happy influence on the markets of the city of New-York, evidenced by the improved quality, the increased supply and extended variety of esculents, including many naturalized exotics, the taste it has inspired for the cultivation of plants, both of the useful and ornamental, with which the parterres and grounds of the citizens are now so generally stocked, and so industriously tended by the fairest of florists, the rivalry produced by exhibitions, and premiums, enlisting at once the pride and interest of competitors, the effect of example not confined to the city, but spreading its influence widely into the interior: these surely must be pleasing results of your labors, they command the admiration of foreigners, while on the citizens at home devolves the acceptable duty of casting over your institution the sweet *flowers* of gratitude. Must not I feel proud in being admitted into an association with persons thus capable, and thus desirous, to add to the comforts and happiness of the human family. I beg you will convey to the society my high sense of the honor they conferred on me.

The favored territory, comprized within the United States, presents a soil and is blessed with a climate suitable to perhaps all the varied vegetable productions of our planet. It is supposed there is not an exotic of whatever climate that could not find a congenial soil in some part of our extensive country, and be therein successfully cultivated. The indigenous plants of America have an interesting claim on attention; they exceed in number, in variety, in beauty, and in usefulness, those of the other portions of the globe, and draw hither the naturalists of other countries, who eagerly seek an acquaintance with, and cull largely from them. How enviable our situation! It is a doubtless fact that art, aiding nature, and directed by science, is capable of rendering the state of New-York the prettiest spot of what may be made the most beautiful garden of the earth.

The skill and enterprize of our citizens are not exceeded, perhaps unequalled, by those of any other people: they fearlessly penetrate the forest to its utmost extent, and visit every foreign shore. Through such men, through the government and commercial agents residing abroad, opportunities offer of procuring seeds and plants, to an extent almost infinite, and in value incalculably beneficial. Of the readiness of individual citizens to advance the honor and the interest of their country, there are instances too numerous for detail. Dr. Perrine, U. S. Consul at Campeachy, addressed letters some time ago to the Chairman of the Committee of Congress, on the subject of Horticulture, urging with much force and correctness the establishment of a Nursery at or near Cape Florida, for the purpose of acclimating useful tropical plants. Many of these, or the seeds thereof, might possibly be subsequently transferred to our and other States, and successfully cultivated. The subject deserves the attentive consideration of the Horticultural Society.

All Europe is filled with admiration at what we have done for literature, not making it the special privilege of the great, but extending it to the humblest resident of the humblest cottage; but we seem, in too great a degree, to have left to others the instruction of the agriculturist: yet the farmer is, and peculiarly so in our land, the main-stay of all that is truly valuable. The same steel that makes his plough, makes also his sword, and this again his plough; he supplies our markets in peace, and repulses our enemy in war; he is literally the bone and sinew of the State; he is the State itself: as a writer justly and forcibly observes, "God has made the breasts of those that labor in the earth his peculiar deposit for substantial virtue; the focus in which he keeps alive the sacred fire, which otherwise might escape from the face of the earth."

The connection of agriculture and horticulture with literary education is a design which is daily becoming popular. The subject has been before the last session of the New-York Legislature, on the memorial of the State Agricultural Society. The principle was favorably received, and reports in acordance were made by committees in each house. The impression was so decided, that no opposition would have been made to a liberal appropriation for the establishment of a State Agricultural and Horticultural School. The memorialists had, however, no design to avail themselves of the crisis, and an intimation was made that they sought for no measure that would not decidedly appear to have the deliberate sanction of the public opinion; the subject of course lay over, but will probably be again before the next ensuing session of the legislature, and is worthy of your patronage.

A very interesting letter of Dr. Pascalis, on the culture of the Mulberry tree, appears among the printed works of your society. I am satisfied that silk of domestic manufacture will, at no very distant day, become the common wear of our citizens, particularly of females. We want the proper reeling machinery; with this, it would, considering its superior durability, not be much more expensive than cotton or linen. I send you a fa-

vorable specimen of Massachusetts raw thrown Silk.

The Grape is a native of our country, and it is easy to add to our assortment, by importations. What but a little application to the subject can prevent our having wine as good and cheap as the French or Portuguese, and raisins are easily manufactured.

It is reasonable to expect that horticulture would, like many other arts, produce more scientific discoveries, under the control of a society having no selfish view to subserve, than it could under the management of an individual cramped by the necessity of drawing from its profits the means of self support. This position cannot be overthrown by mere instances of some cases operating otherwise. It may also be observed, and with still more force, that societies can do but comparatively little, unless they enter directly into the practical part of that which they would enforce on others. Of this your society seems to have been aware.

An effort was made, a few years ago, by the New-York Horticultural Society, to obtain from the Trustees of Columbia College a lease of the Botanic Garden, for the purpose of entering practically into the objects it was laboring to promote. It is unnecessary now to enter into a detail of causes which led to a failure, over which science then wept, but which may in its result be even propitious.

The landscape garden of Mr. Parmentier, in the town of Brooklyn, was full of all promise that taste and skill, enterprise and enthusiasm, could bestow, but it wanted what no individual enterprise can confer—it wanted the essential of permanence. Parmentier died, and the garden, beautiful and useful as it is, but escaped the fate of its enlightened projector. Let death but hurl another dart, and the Parmentier garden may sink into pristine insignificance—the place of the rose, the olive, and the grape, be usurped by the thistle.

The obtaining of the Botanic Garden, or any other ground, on *lease*, would be but a step in advance of the Parmentier Garden. It must be abandoned on the expiration of the lease, unless the lessor would grant a renewal, which no prudent person would rely on. A society having a perpetual succession of members and managers, and laboring on its own fee simple estate, can alone provide for permanence, so far as human institutions can effect that object.

It would appear from publications made under the sanction of your society, that the gentlemen who delivered the Anniversary Addresses were generally under the impression that the society was destined to give to its operations a wide range in every subject that could, to every reasonable extent, come within its purview. Ornamental Gardening on grounds belonging to the society was the theme of several of them. Doctor Mitchill went further, embracing a considerable catalogue, manuscript records, printed publications, a library, topographical maps, a garden, a herbarium or hortus siccus, entymology, manures, botany, schools, &c. Mr. Carter dwells enthusiastically on the indispensibleness of "a large public garden, suitable for conducting experiments on a more extensive scale." The extending of ornamental gardening to squares, promenades, public avenues, &c. is not new. Mr. Carter, and I think others, would apply it to "the ultimate home of all, church-yards and cemeteries," "converting them into attractive instead of repulsive objects." Dr. Francis recommends the formation of "an experimental farm, with a school for instruction in the various branches of preliminary education and agriculture." You have thus, it appears, the merit of originating principles for others to improve on.

The Massachusetts Horticultural Society has made a vigorous essay to connect literary education with practical horticulture, in its various branches, and these again with a cemetery for the repose of the dead. The project is in a course of successful experiment. At a distance of about four miles from the city of Boston, at a place now called Mount Auburn, a tract exceeding seventy acres of land has been purchased, at the cost of six thousand dollars, to which were subsequently added fifty acres, with the design to convert it into a garden for the promotion of Horticulture and an ornamental place of sepulture.

Some just and fascinating descriptions of this place have been published, the beauty of the site, its applicability to the intended purpose, and the many pursuits to which it may be made subservient. The portion intended for a cemetry was laid off in lots of about three hundred square feet. One hundred of these lots were promptly disposed of at sixty dollars each, making in the aggregate a sum equal to the entire cost of the first purchase of the land. Through this ground and its magnificent growth of forest trees, planted there by nature, and now of lofty and luxuriant growth, avenues and paths have been opened in beautiful eccentricity through its rich vallies, around its hills, and into the recesses of its groves, leading now to the botanic garden, now to the orchard, to the flower border, and to the classic ornamented tombs of the deceased:

> "Were I, O God! in churchless lands remaining,
> Far from all voice of teachers and divines,
> My soul would find, in flowers of thy ordaining,
> Priests, Sermons, Shrines."

I could draw your attention more at large to this subject, were I not under the impression that the publications of the day have not escaped your attention; among others a late report of the President of the Massachusetts Horticultural Society, detailing the setting out of several hundred forest, ornamental, and fruit trees. Among the seeds sown, he states having received four hundred and fifty varieties, forwarded to the society from South America, Europe, and Asia. The report says "cemeteries, like that of Mount Auburn, will soon be established in the vicinity of all large cities. A very magnificent one has been commenced near London. At Liverpool and Glasgow, measures have been adopted for emulating the metropolis of Great Britain. In Germany several cemeteries have been projected, and we hear that the citizens of New-York are determined to follow these examples."

Whether the Massachusetts Society had information that *private* enterprise was busy at New-York, to follow or improve on the Mount Auburn plan, I know not; but I should hold it a great evil, were that the case.

You may possibly have the subject in contemplation, and to that the Massachusetts report has I trust reference. I can only say that it is worthy of your Society, and must highly redound to its credit and fame, should it rescue the noble design from individual cupidity.

The visitation of the city of New-York by yellow fever has probably suggested the first law prohibiting interments within the densely inhabited part of the city. The late visitation by Cholera has suggested the idea of extending the non-interment district. The difficulty of determining where to fix the line, more than any other cause, prevents decision. In fact, the city, destined, as the late Governor Clinton observed, to contain its two millions of inhabitants, grows so fast, it seems as if it would overtake any new cemetery that might be laid out on New-York Island, before the same could be enclosed. The unceremonious violations of the homes of the dead by the public authorities of the city have been so frequent, and their repetitions are so much apprehended, that a disposition extensively prevails to withdraw beyond their reach in the selection of burial grounds. It is certain that no site can be found within the city and county of New-York sufficiently extensive for general purposes, such as contemplated at Mount Auburn, even although the immense expense of a purchase did not interfere. For such a site, we must look to Long Island, or the state of New-Jersey. The attendance of friends at the funerals of the deceased would seldom extend beyond the church, or the ferry, and would in this way not be very inconvenient. The citizens are liberal, and would feel on such an occasion an unusual interest. It is not improbable that one or perhaps two hundred purchasers of lots, at one hundred dollars each, could be easily obtained.

The proprietors of Mount Auburn have established, in the city of Boston, a vault to receive bodies as a temporary deposite, when bad weather or other circumstances prevent an immediate removal to their final destination. Here funeral processions end, and the bodies are in due time removed therefrom without parade. The distance from the water's edge at New-York to the water's edge near the cemetery, presuming that the same will be adjacent to the landing place, cannot be material, whether the same be three, four, or a dozen miles.

The resort of the citizens in times of recreation, to such a retreat, would be most delightful, within it would be no incentive to immorality or excess of any kind; the visiter might select the solitude of the grove, or the society of the virtuous; he would find amusement or instruction in every step, in every tree, in every shrub, in every flower, "each leaf a book," he might converse with the learned living, or commune with the silent dead.

I have far exceeded the limits I proposed to myself, when I sat down to thank the Society for the honor conferred on me. I seek not to direct, am unable to instruct; I have yielded to my own zeal, and must seek in it an apology for the unreasonable length of this letter.

I am, with very great respect, gentlemen, yours, very sincerely,

ALEXANDER WALSH.

JACOB LORILLARD, Esq. President,
BENJ. MCVICKAR, M. D. Corres. Sec'y,
of the New-York Horticultural Society.

July 2d, 1833.

At a meeting of the Horticultural Society—

Mr. John F. L. Duflon, of Brooklyn, presented 16 gooseberries, 12 of which weighed 5½ ounces, (named roaring lion.)

Mr. A. Knox presented 12 gooseberries, weighing 5½ ounces 3 pennyweights; also, a handsome boquet, consisting of gilia capitata, veronica, double hollyhocks, dahlias, carnations, &c.

Mr. Wm. Reid presented dahlias, queen of wirtemberg, fulgia, crimson globe, asclepias nivea, spigelia marylandica, saracenia adunca, &c.

Samuel Whittemore, Esq. presented erythrina herbacea, delphinum chinensis, carnations, &c.

Mr. Neale presented a handsome boquet, consisting of sanguinium tea, monthly, and other roses, seedling carnations, clove, and variegated, campanula alba pleno, phlox microphyllia, delphinum grandiflora and chinensis, viola grandiflora purpuria, spirea spicata, monarda didyma, coreopsis tenifolia, &c.

CONSTITUTION, BY-LAWS, &c. OF THE NEW-YORK HORTICULTURAL SOCIETY.

The "New-York Horticultural Society" derives its origin from a few enterprising practical gardeners. They had been accustomed to meet together for the purposes of social intercourse, and of mutual information upon subjects connected with their profession. Such meetings would naturally take place at regular intervals, and lead to the formation of an association like the present.

At one of these meetings, in the month of September, 1818, a constitution and system of by-laws, previously prepared, were presented and adopted. The society at the same time assumed its present name, and elected for its first officers the following members: WILLIAM WILSON, President—JOHN M'NAB, Vice-President—JOHN KERR, Treasurer—and JOHN PRINGLE, Secretary. Since this period its proceedings are regularly recorded.

The benefits to result from such an institution would soon become apparent, and it was joined by numbers of our most respectable citizens, desirous of encouraging its exertions and extending its usefulness. Men of science and of influence became its patrons and honorary members. Among these may be named that eminent statesman, the late honorable Dewitt Clinton, then Governor of our State; the honorable Stephen Van Rensselaer, the honorable William P. Van Ness, Dr. Mitchill, Dr. Hosack, the late Thomas Storm, and Martin Hoffman, Esquires—the three last gentlemen having filled, for many years, its presidential chair. The society has also been honored by the correspondence of learned men, and of similar institutions in foreign countries; and thus much useful information has been collected respecting the horticulture of other nations, as well as of our own.

The spirit of professional emulation, which has been excited and maintained among our practical members, has resulted in an extraordinary improvement in the quality and abundance of the vegetable productions of our luxuriant climate. If the esculents and fruits, now exhibited in our markets, be compared with the kinds offered for sale ten or fifteen years since, the difference, so manifestly in favor of the present varieties, may be attributed, in part at least, to the zeal of the members of this society.

A taste for the cultivation or possession of ornamental shrubs and plants is also becoming more universal among all classes of the community. Indeed this branch of horticulture is almost the only one within the sphere of a great portion of our citizens, limited as they are in space for more extensive culture. But even this affords to the naturalist, the man of leisure, the man of business, the invalid or the aged, the means of innocent enjoyment and rational exercise of mind and body, equally conducive to virtue as to health. To the other sex also, originally called into existence amidst the flowers of paradise and still breathing their fragrance, it continues to prove a source of the purest gratification, and one equally attainable by the humble as by the affluent.

In 1822 the New-York Horticultural Society was incorporated by an act of the State Legislature, and the number of its active resident members now amounts to nearly three hundred. The constitution and by-laws, under which its affairs have been conducted, being found somewhat complicated and inconvenient, they have been revised by a committee appointed for that purpose. The principal change deemed necessary is the substitution of an *Executive Committee* of seven members, in place of a body, indefinite in number, chosen heretofore as a *Council*. The constitution and by-laws, thus re-modelled, have been unanimously adopted, and are now printed for the use of the members. It has also been thought advisable to prepare, and annex thereto, a listof the present members, which has been alphabetically arranged.

New-York, Jan. 1, 1833.

CONSTITUTION.

Sec. 1. *Officers to be annually elected.*—The officers of this society shall consist of one President, not less than three Vice Presidents, a Treasurer, a Corresponding Secretary, a Recording Secretary, and a Librarian, who shall be elected annually, and shall hold their offices for one year, and until others are installed in their places.

Sec. 2. *President.*—The business of the President shall be to preside in all the meetings of the society, to keep order, to state the business lying before the society; to state and put questions which shall have been moved and seconded; and in case of an equal division on any question, to give the casting vote; to call for accounts and reports from all committees; to call all extra meetings of the society when requested so to do, by any five of its members; and generally to execute, or superintend the execution of such by-laws and regulations as the society shall from time to time enact or adopt.

Sec. 3. *Vice-Presidents.*—In case of the absence of the President from any of the meetings, it shall be the duty of the senior Vice-President, then present, to take the chair, who shall, for the time, have and exercise all the authority, privileges, and power of the President; and in case neither the President, nor either of the Vice-Presidents, shall be present at any meeting of the society, the society shall then choose, *viva voce*, a President *pro tempore*, who shall for the time be invested with all the power and authority of the President.

Sec. 4. *Treasurer.*—The Treasurer shall receive for the use of the society all sums of money due or payable thereto, and shall keep and disburse the same, as shall be prescribed from time to time by the regulations and by-laws of the society.

Sec. 5. *Corresponding Secretary.*—The Corresponding Secretary shall prepare all letters to be written in the name of the society, and conduct its correspondence, retaining copies of the same. He shall receive and read all letters and papers addressed to the society, in the order in which they may have been received, and shall preserve or dispose of them in such manner as shall be prescribed by the by-laws, or directed by the society. In the absence of the Corresponding Secretary, the Recording Secretary shall perform his duties, under the direction of the President.

Sec. 6. *Recording Secretary.*—The Recording Secretary shall keep the minutes of the proceedings of the society, and shall regularly record the same in a book to be provided and kept for that purpose. In the absence of the Recording Secretary, the Corresponding Secretary shall perform his duties. And in the absence of both Secretaries, the President shall appoint either a Corresponding or Recording Secretary, or both, *pro tempore*.

Sec. 7. *Librarian.*—The Librarian shall have the charge of the books, drawings and engravings, belonging to the society. He shall keep the same in good order, and enter their titles regularly in a catalogue. No book shall be given out to any member, without having the date of its delivery and return recorded: nor shall any book be retained by a member for a longer period than one month, under a penalty of twenty-five cents each week thereafter.

Sec. 8. *Elections by Ballot.*—All elections for officers of, this society shall be by ballot, and all the members of this society shall be elected by ballot. Candidates for admission shall only be proposed and balloted for at a stated meeting of the society.

Sec. 9. *Succession of Members.*—Whensoever a member shall signify to the Secretary, under his hand, that he desires to withdraw from the society, the Secretary shall record and report the same at the next meeting of the society; and the party so withdrawing shall cease to be a member, on the payment of such dues as he may then owe the society.

Sec. 10. *Anniversary Meeting.*—The anniversary of the society shall be observed on the last Tuesday in August in each year, or on such other day as the society may appoint.

Sec. 11. *Stated Meetings.*—The stated meetings of the society shall be held on the last Tuesday of every month, at such time and place as shall be directed by the society. Not less than seven members shall form a quorum for the transaction of business.

Sec. 12. *Amendments to the Constitution.*—This constitution may be amended in the manner following: Any amendment or amendments thereto may be proposed at any stated meeting of the society. They shall be entered on the minutes, and the President shall read, or direct them to be read by the Secretary, and stated for discussion at the next stated meeting of the society, and if three-fourths of the members present shall vote in favor of adopting them, they shall be recorded as a part of the constitution.

BY-LAWS.

I. *Time of Elections.*—All the officers directed to be chosen by the constitution of this society, and all other officers which may be provided for by the by-laws thereof, shall be elected at the anniversary meeting of the society on the last Tuesday in August in each year, or on such other day as the society may appoint, and shall enter on the duties of their respective offices at the stated meeting next ensuing that at which they were elected.

II. *Notices of Elections, and Quorum necessary.*—At least ten days notice shall be given by the Recording Secretary of every annual election, by publishing the same in two or more newspapers printed in this city. The notice shall specify particularly the time and place when and where the said election is to be held, and the different officers to be voted for, and unless thirteen members at least shall attend on the last Tuesday in August, and give in their votes, the President or presiding officer shall adjourn the said election to some convenient day, prior to the next stated meeting of the society, of which adjourned election the like notice shall be given as of the regular annual election; and the election shall then proceed, whatever may be the number of members present.

III. Prescribs the mode of balloting for officers.

IV. *Vacancies filled.*—When any vacancy shall happen, either by death or resignation, in any of the offices established by the constitution or by-laws of the society, it shall be filled at the next stated meeting of the society after the vacancy shall have happened, unless the election shall be postponed to a subsequent day by a majority of the members then present, and the election shall be conducted as nearly as may be after the manner herein prescribed for the annual election of officers.

V. *Treasurer's Accounts.*—The Treasurer shall demand and collect all monies due to the society, and shall keep regular accounts of all sums received and disbursed by him. Every payment exceeding ten dollars shall be made by order of the society. The accounts of the Treasurer shall be audited annually, at least one week previous to the anniversary meeting of the society, by a committee consisting of three members, to be appointed by the society, and of the President and Secretary, who shall be members ex-officio. The said committee shall report at the anniversary meeting the balance in the Treasurer's hands, and the general state of the funds of the society, together with a list of the delinquents in paying their dues.

VI. *Duties of Secretaries.*—It shall be the duty of the Corresponding Secretary, and of the Recording Secretary, to attend at all the meetings of the society: and the Recording Secre-

tary shall prepare and give notice of all meetings.

VII. *Executive Committee.*—A committee of seven members, to be called the Executive Committee, shall be annually appointed by the society. The President, Vice-Presidents and Secretaries shall be ex-officio members of this committee, and five members shall form a quorum.

VIII. *Chairman of Executive Committee.*—The President or senior Vice-President present, and if neither the President nor either of the Vice-Presidents shall attend, then the senior member present, shall preside at the meetings of the Executive Committee.

IX. *Meetings of Executive Committee.*—The Executive Committee may meet at such time and place as may be deemed expedient, and any three members thereof shall have power to convene meetings at their discretion, giving due notice of the time and place of each meeting to each of the members thereof.

X. *Disposition of Communications, &c.*—All books, papers or communications, addressed or presented to the society, shall be referred to the particular consideration of the Executive Committee, who shall direct how the same are to be disposed of. No publication of any matter connected with the society shall be made unless by the sanction of the Executive Committee.

XI. *Minutes of Proceedings.*—Minutes of the proceedings of the Executive Committee shall be kept, and read before the society at each stated meeting thereof.

XII. *Inspecting Committee.*—The society, at its stated meeting in February in each year, or at its next subsequent meeting, shall appoint a committee of seven members, who shall serve for one year as an Inspecting Committee. They shall examine and describe minutely every subject presented to them for exhibition or competition, whether culinary vegetables, fruits, plants or flowers, and shall report to the society, at the close of the season, the relative merits of each.

XIII. *Premiums.*—The society shall annually, at its discretion, direct rewards to be given to such members as may, in their opinion, have essentially advanced the objects of the society, either by frequent communications thereto, or by having made important additions to the science of horticulture, or who by diligence and exertion in the service of the society, shall have merited distinction; and may also award premiums to the members of the society, of such value, in such manner and under such regulations as may be deemed proper and expedient, either for the invention and discovery of any new matter in horticulture, or some important improvements therein: or for exhibition to the society or the Inspecting Committee, or any fruits, vegetables or plants of their own growth or cultivation, and either new in their kind or of uncommon excellence as to quality; or for any new and successful method of cultivating any kind of esculent vegetables, fruits, ornamental shrubs or flowers, or any other subject connected with horticulture.

XIV. *Presentation of Premiums.*—If, at any time, rewards or premiums shall be awarded by the society, they shall be presented and given to the persons entitled thereto, or to his representative, by the President or presiding officer of the society, at its next stated meeting. The names of all persons to whom rewards or premiums shall have been awarded in the course of the year shall be duly recorded, and such publicity given thereto as the society shall direct.

XV. *Candidates for Membership.*—Every candidate for admission into the society shall be proposed and recommended at a stated meeting of the society, by at least two of its members, and shall be balloted for at the next or some subsequent stated meeting.

XVI. *Admission Fee.*—Every person elected shall, before he takes his seat, pay an admission fee of five dollars, which will entitle him to a certificate of membership.

XVII. *Annual Dues.*—The annual contributions of each member shall be two dollars, payable quarterly from the day of his election; but any member of the society may at any time compound for his future contributions, by the payment of twenty dollars.

XVIII. *Delinquents.*—No member of the society shall be entitled to receive any publications of the society, or to vote at any election or meeting of the society, or be eligible to any office therein, who has, for more than twelve months, omitted to pay his quarterly contribution. And if his dues shall, at any time, be in arrear for more than two years, and have been demanded, he may be ejected from the society by the votes of two-thirds of members present at any stated meeting.

XIX. *Copies of the Constitution, &c.*—Every member at the time of his admission shall be presented by the Recording Secretary with a printed copy of the charter, constitution and by-laws of the society.

XX. *Records of Admission.*—The election and admission of every member, with the time thereof, shall be recorded.

XXI. *Classes of Membership.*—There shall be two classes of members exclusive of ordinary members, to wit, honorary members and corresponding members.

XXII. *Honorary Members.*—Honorary members shall be eminent persons, distinguished either in this or other countries for their attainments in the science of horticulture. They shall be proposed at a stated meeting of the society, and elected at that or a subsequent stated meeting by the votes of two-thirds of the members present.

XXIII. *Privileges of Honorary Members.*—Honorary members shall be exempt from the payment of fees or contributions. They shall not be entitled to vote at any election or meeting of the society, nor be eligible to any office therein, but shall have the privilege of attending all meetings thereof.

XXIV. *Corresponding Members.*—The corresponding members of this society may be citizens or subjects of any country, distinguished for their practical skill and knowledge in the science of horticulture. The President, either of the Vice-Presidents, or Secretaries, may hold a correspondence on subjects relating to horticulture, with such of them as shall be deemed convenient or expedient; communicating such correspondence to the society.

XXV. *Privileges of Corresponding Members.*—The corresponding members shall not be subject to the payment of fees or contributions, nor be entitled to any of the privileges of members, except that of attending the meetings of the society, and may receive such rewards and honors as the society may deem expedient to bestow, in consideration of meritorious services. They shall be proposed and elected in like manner as honorary members.

XXVI. *Expenses of Correspondence.*—All the expenses incurred by any corresponding member, in promoting, under the direction of the officers of the society, the objects thereof, shall be paid out of the funds of the society, under the direction of the Executive Committee.

XXVII. *Diplomas or Certificates.*—There shall be transmitted to each honorary member, and to each corresponding member, as soon as may be, after his election, a diploma or certificate of his election, under the seal of the society, signed by the President, and countersigned by the Secretary.

XXVIII. *Amendments of By-laws.*—The Executive Committee shall have power, as occasion may require, to make and establish such additional by-laws and regulations, not repugnant to the constitution of the society, as shall be deemed useful and necessary for the government or advantage thereof: but such by-laws and regulations shall be reported to the society at its next stated meeting, and shall then be subject to be modified or repealed by the society, or at any subsequent stated meeting, two thirds of the members present concurring in such modification or repeal.

MEMBERS.

Patrons.

The Honorable Stephen Van Rensselaer,
David Hosack, M. D. F. R. S. F. L. S.

Officers, elected September 11, 1832.

PRESIDENT.

Jacob Lorillard, Esq.

VICE-PRESIDENTS.

Philip Hone, Esq., Gideon Lee, Esq.,
William Neilson, Esq., Chas. Oakley, Esq.,
John J. Palmer, Esq.

TREASURER.

John Groshon, Esq.

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Benjamin M'Vickar, M. D.

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Myrtle or Bayberry Wax, (Myrica cerifera.)

By L. T. [For the New-York Farmer.]

Mr. Editor,—In the agricultural, as well as in the manufactural and mechanical pursuits, new sources of wealth are continually opening to the spirit of inquiry which appears to pervade our country. It is difficult to form an idea of the increased productiveness of the soil of our extensive country, when the plough shall every where be under the direction of an intelligent and cultivated mind, when every native plant shall receive the attention which its merits deserve, and when every useful exotic shall be generally introduced, and successfully cultivated.

Among those neglected plants I would recommend to the notice of farmers the following interesting article, taken from the Georgetown, D. C. Gazette:

"The Vegetable Wax, called Bayberry in the Northern, and Myrtle Wax in the Southern parts of the United States, is the produce of a shrub called by botanists *Myrica Cerifera*, which sometimes grows to the size of a small tree, and is found abundantly along the coast, from Maine in the North, to Texas, on the Gulf of Mexico. The wax is extracted from this shrub by collecting the berries, boiling them with water, and bruising them at the same time, by which the wax will rise to the top as a thick oily scum, easily separated, which, when cold, turns out a moderately hard substance, of a green dingy color. After chemical investigation that substance has been found to resemble bees' wax so closely in the most important properties, that they may be classed under the same genus of chemical bodies.

Until now, the use of this wax has been very limited; the farmers pick up in swamps and the woods a sufficient quantity to supply themselves with candles; and if there is any surplus they send it to market in New-York, Boston, or other Northern places, where it is bought by candle makers, who mix it with their tallow, in order to correct, in summer, the extreme softness of their candles.

Notwithstanding the abundance of its growth, the picking up of the berries among swamps, thick wood and mire, is so laborious, that people who have attempted the collection of the wax as a special business and matter of trade, have found that one single bushel of berries is the utmost a stout and active man can collect in one day's work, hence its price in market is very high, fluctuating between 18 and 25 cents per pound.

The object of this publication is to invite the attention of farmers to the cultivation of the shrub affording the myrtle wax, in order to bring its price down to that of tallow. It is obvious that should the shrubs be collected in one field, consequently ready at hand, it is obvious I say, that the same man, who, under the difficulty of wandering in swamps, wood and mire, can collect but one bushel, shall be able, when he finds the shrubs gathered together in the same field, to pick up in the same space of time from three to four bushels, can also deliver his wax at a price proportionably reduced; that is to say, from 25, to 8, 9, or 10 cents per pound.

The question now is to investigate what will be the net produce of an acre planted in myrtle wax, the wax selling at the reduced price of 10 cents per pound.

Let us suppose each shrub planted at two and a half feet from each other, there will be in one acre 6724 of them: supposing, next, the average product of each shrub to be only one pint of the berries—then the whole crop will amount to 6724 pints, making up 105 bushels. Now experience has shown by those who follow the trade, that the quantity of wax obtained from a bushel of berries averages from 5 to 8 pounds, then our 105 bushels of berries would yield 630 pounds of wax, which, at ten cents a pound, tallow price, would make $63.

As we have stated already, one man will pick up in a field from 3 to 4 bushels in one day, it follows that the picking of the whole 105 bushels will require the labor of a hand during a whole month; admitting $18 for the wages and finding—then $18 deducted from $63, the value of the crop as before stated, the balance, $45, will be the net profit accruing to the farmer.

Besides such a valuable income, this culture receives additional recommendations from the following circumstances:

1st. It grows in the worst soils, especially if damp and sandy.

2d. It requires no fences, as the cattle do not meddle with it.

3d. Once planted, it requires no attendance except in picking time.

4th. The picking may be performed by boys, girls, old men and old women, who else would be useless on the plantation.

5th. By a process discovered lately, the myrtle wax may be bleached to a degree of whiteness equal to that of bees' wax. This process adds only five cents per pound to the original price, is done in a short time, and within the power of every individual to perform.

6th. A Soap equal, if not superior, to any shaving or fancy soap imported from Europe, can be manufactured of the Myrtle wax.

We may say in conclusion, that, by cultivating the myrtle wax, a most important staple will be introduced in the United States. The most probable consequences of this introduction will be, 1st. That this wax will supercede tallow in making candles, on account of its superior hardness and cleanliness; next, the establishment of bleaching and soap manufactories on the largest scale; that it will become an article of exportation, especially to the West Indies, and, however abundant it may become in the market, will always meet with a ready sale. L. T.

Description and Drawings of several varieties of Fancy Pigeons. By D. F. A. [For the New-York Farmer.]

MR. EDITOR,—The productions of nature have ever been to me a delightful study, and doubtless is so to most of the numerous readers of your Farmers' journal. While meditating on their endless varieties, habits, and shapes, the mind is enlarged, and we are imperceptibly led to adore the great First Cause. In my early youth the fields, the woods, and their numerous inhabitants, bore to me a more familiar face than that of man. Free as the air, and like its feathery race, I shunned human abodes, and found companions in the leafy shade. But, alas! fate assigned me a different sphere, and torn from my much loved hill and glen I now pine in the smoke and dust of a crowded city. A little tea-tray of earth, which my landlord calls a garden, and for which he makes me pay an extra rent, I have long neglected—for it made me melancholy: the poor little sickly plants that struggled hard for life through smoke and dust, and endured the oft-repeated buffetings of the cat, looked too sad, too much unlike their fellows, who had so oft refreshed my eyes with all their luxuriance and splendor. Then next bethought I of the feathered tribe, and bought and imprisoned many a songster wild; but the poor things sang plaintively, and looked so sad, I could not keep them there; and one fine morn in spring, I set the warblers free. Ungrateful birds! not one has ever returned to make me glad with a song, although the stunted peach tree blossoms, and affords a perch before my window.

Next came domestic doves and fancy pigeons. These had so long relied on the fostering care of man, that they would starve in the harvest field. I liked them much—they would be friendly, and were every day the same—would hover round my head, or perch on my shoulder, and peck around for their food. I have many sorts and colors, brought from different climes, forming a vast republic, always wooing, laying, hatching, rearing—some for use and some for show. I will describe a few of the principal sorts, to accompany the drawings, which you, Mr. Editor, know to be correct, from having seen the living specimens, and from the fact that the branch of the fine arts, which I have long followed as a profession, qualifies me for the undertaking. But, perhaps, some of your readers may wish to keep them too: I will, therefore, first describe the apartment. I have

Carrier Pigeon.

English Pouter.

chosen a large garret with windows to the sun. Before one of them is a cage several feet square, made of lath and wire, so that by hoisting a window, they can take the air and feel the rain without being able to escape. The room is all shelved about with boards just as they came from the timber yard, 18 inches one above the other, and partitioned every three feet. In each end of these partitions is placed, for nests, a common earthen pan, 3 inches high and 9 across. A little straw is placed in each, for some will not make their nests. These partitions are all white-washed with thick lime and water, to make all look light and clean. They should be done so once or twice a year. In the middle of the floor is a three-gallon stone jug turned upside down, with the neck in a shallow small pan. The jug, supported by an iron hoop with feet, will let the water into the pan no faster than it is drinked by the pigeons, and consequently is always cool and clean. A broad flat box about three inches deep should contain food—Indian corn and peas: or a box, called a hopper, may be made on the same principle as the water apparatus. Now for the different varieties:

First on the list stands the Carrier Pigeon, which fanciers call the King of Pigeons. This bird is so well known by report that few have not heard that it will return to its home with a letter from a very great distance, and at a rate five times faster than any animal can travel the same distance. The print is taken from one that has lately been imported, and can be seen at the Pigeon Society's Rooms, corner of Broome and Forsyth streets, New-York. This variety should be of one uniform color—either black, blue, or dun. Its distinctive mark is the encrusted flesh round its eyes and beak. They are good breeders, and worth from $10 to $15 a pair; though the bird from which the drawing is taken, $30 would not purchase.

The English Pouter. This is the most familiar of all pigeons. It has the most singular appearance. Under its beak it has a bladder or crop, which it can at pleasure fill with air to the enormous size of 18 inches in circumference. They should be of a black, blue, red, or yellow color, and have a white half moon on the front of the crop, white flights to its wings, and white legs and thighs; also, a few little white feathers in the form of a rose on its pinions; of whatever color the body is, the aforesaid parts must be uniformly white. The red and yellow birds have generally white tails, but the tails being of the same color is preferable. These birds are worth from $10 to $20 per pair.

The Almond Jamble. This is a most splendid little bird, being the smallest of the domestic pigeons; they are spotted all over with yellow, red, black and white, with a changeable green around the neck; they are said to resemble the best broken tulips when the most perfect; the female is generally less gay, being nearly of the color of the shell of the almond, from which nut it derives its name, as that color ought to prevail. They are valued more in proportion as the color is rich and the beak very small: they are very merry birds, and when flying they perform curious evolutions in the air, and will ascend a very great height, keeping on the wing for two or three hours occasionally: they are good breeding birds, and give but little trouble. They sell at from three to ten dollars per pair.

The Fantail. This bird is a very singular variety of the Pigeon tribe, its tail being turned back so as to meet its head: it is also very large, being composed of from 24 to 36 feathers: these are spread out so as to resemble a lady's fan, which have given this pigeon the name of Fantail: they are most preferred when of a perfectly white color, and some are ornamented with a very lofty tuft at the back of the head. They are worth about $3 per pair, and are good nurses, &c. D. F. A.

Beekman st. N. Y. June, 1833.

To prevent Crows, Blackbirds and Poultry, from destroying Corn. By R. M. W. [For the New-York Farmer.]

MR. FLEET,—Take two ounces of Nux Vomica, bruise it in a mortar, and put it into some useless vessel; pour on to it two quarts of boiling water, and let it stand twelve hours;

then add a gallon of cold, and stir it well together; then add a peck of corn; let it stand twelve hours longer. Scatter this corn about the corn field, and if any bird takes it, although it may not kill, it will make them so sick that they will not trouble the corn again.

I believe it will not kill birds; but if rats or squirrels take it, it is certain death.

R. M. W.

Potter, June 5, 1833.

A Great Haul of Fish. By H. K. T. [For the New-York Farmer.]

Mr. Fleet,—On Wednesday, June 5, one seine drew on shore at this place, at a single haul, twelve thousand two hundred and fifty drum fish, the average weight of which was found by experiment to be thirty-three pounds, making in the aggregate two hundred and two tons two hundred and fifty pounds. This is undoubtedly the greatest haul of the kind ever known in this country. A hundred witnesses are ready to attest the truth of the above statement. They are used for manure.

Yours, &c. H. K. T.

Oyster Ponds, L. I. June 7, 1833.

[Remarks.—The above is from the Post Master of the above place, and may be relied on as correct.—Ed. N. Y. F.]

Mortar of Unslacked Lime. By R. M. W. [For the New-York Farmer.]

Mr. Fleet,—I apprehend that Dr. J. W. Smith, of the Genesee Farmer, understands the practice of physic better than mixing mortar. His mixture of twelve parts coarse sand, and one part of *unslacked lime*, would make a queer mortar, even if the lime could be mixed without slacking; but as yet I have to learn how it can be mixed in mortar before it is slacked. Yours, &c. R. M. W.

March 14, 1833.

Agriculture of Yucatan—Tropical Plants. By Dr. H. Perrine. To the Editor of the New-York Farmer.

Consulate, U. S. A. Campeche, 25th May, 1833.

Sir,—I intended to fill this sheet with information concerning the simple agriculture of Yucatan, which, I have before stated, employs neither plough nor harrow, nor spade nor rake, but as I have given a letter of introduction to the Senor Leal, a native cultivator of this peninsula, you will be able to acquire from him the few details relative to Corn and Cotton, Cassave and the Cane. By-the-bye, according to Bernal Dean, the very name of Yucatan consists of two Maya words, which signify Cassave field. Notwithstanding the apparent sterility of its rocky surfaces, it already produces sugar for exportation, although the *first stalk* of Otaheitan Cane was introduced only fifteen years ago. Indeed in the delicious climates of the tropics, vegetables seem to need scarcely any nourishment direct from the soil, and either ignorance or cowardice must have represented them as hostile to the health of the human race. As the South Carolina disturbance has prevented the passage of the bill reported in favor of my enterprize for domesticating tropical plants in the equally delightful atmosphere of Cape Florida, I must content myself here with the promise of J. Dubose, to receive and take care of the seeds and plants of which I have already forwarded to him there a great variety. The two greatest blessings of God to man, the Plantain or Banana plant and the Cocoa Palm, are already flourishing at the Cape, with the Orange and the Lime. This summer will probably add to them the most productive farinaceous root on earth, the Jalsopher Manchot, of which they extract in this peninsula the finest starch at the rate of 2500 to 4000 pounds the acre, which sells on the land where it is produced at less than two cents the pound, and in this city, with the costs of long land transportation, at three dollars and a half the 100 pounds. Add to this the fine flour which is produced in abundance by the mild root of the Maranta Arundenacea, and sold in our apothecary shops as a luxury for the sick, under the name of arrow root, but which may be as well made a cheap subsistence for the well. But I have not time even to sketch the outlines of the value of the various tropical plants which I have already forwarded, and which I trust in God will arrive in safety. Should a single vegetable of each species arrive at maturity at the Cape, I shall have conquered the most formidable obstacles to the complete success of my enterprize of domesticating tropical plants in the United States, by *gradual* acclimation.

Who dare assert that the Canary Plantain will not extend to the Potomac?

Very respectfully, your obedient servant,

H. Perrine.

Equal quantity of Pot Ashes obtained from the same quantity of Ashes. By R. M. W. [For the New-York Farmer.]

Mr. Fleet,—I very much doubt the possibility of obtaining two tons of Pot-Ash by any new process from the same quantity of raw ashes. I am well aware that our ashes are often thrown out of the leaches, before the strengt h is entirely exhausted, but, in a well regulated pot-ash, it is usual to water the leaches as long as they will color or taste the lies, after which they are emptied. Now the only question with me is, whether soft water properly applied will dissolve all the alkali, and, if so, I cannot but believe that we shall work the leached ashes in vain. A patent was obtained some years ago for working over leached ashes, but it was soon abandoned, and the expense exceeded the profit. It is true some names are mentioned that ought to give some confidence in this project, but I conceive that the men must have been mistaken. That ashes may be increased in bulk and weight, by adding limestone, sand and salt, is very certain, but it is evidently an adulteration, and no increase of alkali; and it is easily detected when proper tests are applied.

R. M. W.

NEW-YORK FARMER.

JULY 1, 1833.

Bone Manure for Corn.—In conversation with Dr. B. of Long Island, we learn that his application of bone manure is attended with beneficial effects on corn. The bone was first fermented by heaping it up with a sufficient quantity of horse manure, to produce fermentation, and then spread on the ground at the rate of twenty bushels to the acre. Although the season is very backward for corn, yet now, 25th June, the contrast with other portions of the field manured in various ways is quite considerable.

His farm is about eight miles from the landing. The expense of carting a load of twenty bushels of bone dust is seventy-five cents. This added to the cost of the bone, at the rate of thirty cents a bushel, amounts to six dollars and seventy-five cents. A moderate manuring of leached ashes, the most favorite manure of Long Island, requires five loads, costing one dollar and seventy-five cents: this together with the cartage amounts to twelve dollars and fifty cents, showing a difference of five dollars and seventy-five cents in favor of bone manure. By reference to former pages of the current volume of the New-York Farmer, it will be perceived that this manure is of a durable nature; and the advantages of using it cannot fail of being perceived, especially by those farmers who are obliged to cart their manure a considerable distance. We shall continue to make our readers acquainted with the results of experiments now making with this most important manure, and in the mean time we hope they will not be backward in adding to the stock of information by trying similar experiments. It is with pleasure we learn that several of the neighbors of Dr. B. intend giving orders for considerable quantities for fall crops.

Laboring School.—Among the acts passed during the last session of the legislature of this State, is one to incorporate the Aurora Manual Labor Seminary, in the county of Erie.

Tanners' Bark.—Mr. Benjamin Hodge, jr. of Buffalo, says, in the Genesee Farmer, he went to considerable trouble, on the authority of the New-York Farmer, to manure a field with tanners' bark, and for his pains reaped sterility. We do not recollect, either on our own authority, or that of our correspondents, to have recommended tanners' bark. In vol. 1st, page 149, of the old series, is an extract from notes to Davy's Agricultural Chemistry, recommending this bark. It says, "Tanners' spent bark, particularly oak, *if its use is well understood*, is not duly appreciated. When in its simple state, it appears perfectly inert and useless; but in fact it is not so. There are few materials, perhaps none, that so completely, by one application, break down and destroy the tenacity of a strong clay soil. This is frequently accomplished by ploughing in one heavy dressing of bark. The land then, however, without a supply of other manure, sometimes becomes sterile or unproductive. If the bark be combined with stable manure or quick lime, it becomes an active agent, and answers a valuable purpose on land that has been cropped a number of years in succession, and is thereby in some degree destitute of vegetable matter. As it costs but little besides the expense of carting, it may be added to the pile of compost, and increase both its bulk and its value."

Lands in Virginia.—The Rev. Mr. Plummer, from Virginia, in addressing the American Home Missionary Society, at its recent anniversary, remarked incidentally that, during the last few years, twenty thousand Swiss and Belgian emigrants had settled upon lands in Virginia and Maryland, which had been supposed to be worn out, and almost worthless; but which under their cultivation had been made as productive as the good lands of the West. In consequence of this, land had risen in value, and industry received a new impulse. Politicians should learn a lesson from these facts: before complaining of the operation of tariff laws, they should first scrutinize the manners, habits, and views of the people.

MANURE IS WEALTH.—In our intercourse with some of the farmers residing within forty or fifty miles from New-York on Long Island, we have been surprized at the instances related to us of the profitableness of farming. Some farmers known to have labored and toiled hard have continued yearly to fall in arrears until they have commenced *buying* manure. Fifty-six cents are given per carman load at the landing, for the apparent worthless dirt swept from the street. This applied at the rate of twenty loads produces wealth. The very farmers who could not obtain a living by using only manure made on their farms, have, in a very few years, not only freed their farms from incumbrances, but purchased others in addition, and are now, from the yearly profit of their farms, putting money out at interest. If then it is found so profitable to *buy* manure, and be at the various expenses attending the carting, how very important is it to give special attention to increasing the quantity and improving the quality of that made on the farm. There is no question but that almost every farmer can double the quantity of his domestic or yard manure without scarcely any additional expense. It is thought too, that at least fifty per cent of the nutritive properties of yard manure are lost by drenching of rain, excessive fermentations, and injudicious application to soil. The more we consider this subject the greater does it become in importance, and justly regarded as the primary object in farming.

FLIES EAT CHERRIES.—Those flies that are drawn to heaps of fish used for manure, are very fond of cherries, so much so as to consume all the cherries on a tree in a few days.

PARTIAL EXPERIMENTS.—Wood ashes, both dried and leached, have long been recommended as tending to injure and destroy insects in the soil. We have heard of a farmer, who has been in the habit of using ashes extensively as manure, declaring his intention of discontinuing the use of them altogether on his farm, being convinced that they tend greatly to increase insects and worms injurious to crops. It is very questionable whether this farmer has taken into consideration all the circumstances that are requisite to draw his conclusion. It is very probable that causes, such as the state of the seasons, the changes in the soil by other agents, an unusual prolificness of insects, or the introduction of other grains and grasses, and a thousand other things, may have produced the effect attributed to ashes. It is owing to such partial and deficient experiments that so much contrariety of sentiments exists among farmers.

SALE OF IMPROVED STOCK.—At the sale of the late Richard K. Meade, of Virginia, the best half-blooded Durham bulls brought $140; the best cows with calf, $107; heifers, $36; Bakewell rams, $29, 75; Frederick rams, an improved cross breed by Mr. Meade, from sheep of the United States, some fleeces of which weighed 16 lbs., $70; Frederick ewes, with lambs, $15. The sales of the sheep were exclusive of the fleece, which sold at 29½ cents per lb. unwashed. The Westchester (Va.) Republican says, "We have seen a letter from an eminent wool stapler in the interior of Pennsylvania, pronouncing the wool superior to any he had ever seen." The whole amount of sales was $3200, besides $300 or $400 of Frederick rams unsold.

LOCUST TREES ON LONG ISLAND.—For some ten or twenty years past the attention to this valuable tree has been constantly increasing in many parts of the Island. It is now quite common to see them not only occupying the lanes, avenues and yards, about the residences and out-buildings, but whole fields. They are propagated in various ways, but generally by ploughing among them, thus causing them to sprout from the broken roots. Some farmers begin to sow the seed, and cultivate them with corn and other crops that require the ground to be enriched and frequently stirred. In the spring, while in bloom, the air is literally fragrant with their perfume. From locust trees alone the value of property on the Island is increasing, and will continue to increase.

MULBERRY.—On the 10th ult. there were sold at auction by Mr. R. K. Haight, of this city, 5000 of the Chinese Mulberry, *morus multicaulis*, at from 12½ to 30 cents each. This plant is so easily propagated, that in two or three years it will be readily obtained by the quantity at 5 or 6 cents each. It is much better economy to pay 50 or 60 cents each for a few now, than to wait several years at a tenth of these prices.

MARKET FOR COCOONS.—The American Farmer states that a silk filature is about to be established in Baltimore, and that Mr. Hitchcock, proprietor of that paper, is authorised to purchase cocoons at twenty-five to fifty cents per pound, according to their quality.

TEMPERANCE IN HARVEST.—It is to be hoped that every farmer who regards the welfare of his family, his domestics, his neighbors, his country, and who is desirous of preserving his farm for the benefit of himself and children, will banish from his dwelling and his fields the cup that produces intoxication, and unnerves and weakens the strong arm. We make the following extract from the Annual Report of the American Temperance Society:

"Oh," said a merchant in a large country store, "it is a horrible business. When I set up my store at this corner, within a mile round here were a great number of able, thriving, and reputable farmers, but now about half of them are ruined; and many of them were ruined at my store.

What was the consequence with regard to those farmers? Their farms were growing up to briars and thorns, the enclosures were falling down, the buildings were in a state of decay and dilapidation; the implements of husbandry worn out and scattered; the lands less productive and less valuable; and every thing looked like the region which the Lord had cursed. And how did it affect the merchant? They were to him less valuable customers, because they had next to nothing with which to purchase; and for what he often could not get his pay. His rum debtors died insolvent, and it was ardent spirits which made nearly all his bad debts, and his losses were often greater than his profits; while the number of good, able, and permanent customers constantly diminished. Suppose, now, he had sold only that, which, while it was consumed, would have been replaced by more than its value, as is the case with provisions, clothes and useful articles, his customers would have been permanent, and their value to him and the community constantly increased. So with all merchants and all men throughout the country."

UNDER DRAINS OF STRAW.—These are constructed, says the Genesee Farmer, in some districts of Europe, by digging a trench two feet deep, and then, with a narrow tapering spade, taking out a spit from the centre, six inches deep, leaving a shoulder on each side. Fill this lower space with twisted ropes of straw, pressed down. Lay sods or other suitable substances upon the straw and resting on the shoulders. Years after when the straw is rotted, hollow drains will remain.

SAWING AND BORING MACHINE.—Among the useful machines that are brought not unfrequently to notice is the following:

There are now exhibiting at the National Hotel, in this city, (says the Philadelphia Chronicle,) models of one of the most ingenious pieces of machinery ever witnessed. It is used for sawing and boring, and the mathematical accuracy of its various operations is really surprizing. It will turn out 500 wheel fellies in a day, while 14 are considered a good day's wheelwright labor. It saws segments of any dimensions or description, slats and legs for chairs, performs all kinds of out sawing, small framing, mitre joints, &c. &c. and all with accuracy and expedition. The whole machine is but six feet square, and is turned by a steam engine of one horse power. Its expense of construction is as trifling as it is simple, and can be worked by an apprentice with ease and safety. It is very worthy of public attention, and will well repay a visit.

WATERING HORSES.—Horses used on the roads in this country are watered several times in the course of the day—stage horses every few miles. "We recollect," says the Cincinnati Advertiser, "on a very warm and dusty day, travelling in a stage over the hills of Normandy; the horses foaming with sweat and covered with dust. The driver stopped at an inn, and when we expected to see him with his bucket, giving water to each, he brought from the house a *bottle*, and pouring out into his hand some of the contents, he washed each horse's nose and threw a little up into them. On inquiring, we found it was *Vinegar;* and although they had already travelled a long stage, they went off as fresh as at the first starting."

Premiums offered by the Albany Horticultural Society, for the year 1833—*Free for the competition of all.*

As the Society are desirous of introducing new and useful plants, and of improving our Vegetable and Fruit Markets, by exciting a laudable emulation among those who supply those Markets, they invite Market Gardeners, as well as others, to bring forward for exhibition the products of their labor. It is, however, to be understood, that premiums will not be awarded except on articles which are either early, rare, or better than ordinary of their kind; and that in all cases prior to the first of September, the *earliest* Vegetables, in good market condition, will receive precedence. Under these limitations, there will be awarded,

On Saturday, 13th July—	
Green Corn, best dozen ears,	$1 00
Squashes, best pair	1 00
Currants, best 20 bunches,	1 00
Raspberries, best pint,	1 00
Gooseberries, largest dozen,	1 00
Cherries, best quart,	1 00
Pears, and Apples, best dozen,	1 00
Flowers, best boquet,	1 00
On Saturday, 10th August—	
Lima Beans, best 50 pods,	1 00
Tomatoes, best dozen,	1 00
Apricots, best dozen,	1 00
Peaches, best dozen,	1 00

Plums, best pint,	1 00
Muskmelons, best pair	1 00
Flowers, best boquet,	1 00
On 4th September, the Society's Anniversary—	
Vegetables, the greatest and best variety,	2 00
Second best ditto	1 00
Fruit, the greatest and best variety,	2 00
Second best ditto,	1 00
Flowers, greatest and best variety,	2 00
Second best ditto,	1 00
On Saturday, 21st September—	
Grapes, (native,) best 4 bunches,	1 00
Grapes, (foreign,) best 4 bunches,	1 00
Grapes, greatest variety,	1 00
Pears, best dozen,	1 00
Peaches, best dozen,	1 00
Plums, best quart,	1 00
Flowers, best variety,	1 00
On Saturday, 12th October—	
Cellery, best 3 stalks,	1 00
Cabbages, best variety, 1 dozen,	2 00
Winter Squash, best pair,	1 00
Apples, best variety,	1 00
Pears, best dozen,	1 00
Quinces, best half dozen,	1 00
Flowers, best variety,	1 00

Discretionary premiums will be awarded in addition to the preceding, upon whatever may appear meritorious, whether of plants, vegetables, fruits, or flowers, not exceeding twenty dollars.

REGULATIONS.

The Inspecting Committee will meet every Saturday, as above noted, at 6 o'clock, P. M. at the City Hall. The articles offered for premium must be delivered fifteen minutes before that hour, (at the room provided for that purpose,) to a person who will take charge of and arrange them, accompanied by the owner's name. After the examination by the Committee, visitors will be admitted, and the articles disposed of as the owners may direct, except those exhibited on the 4th of September. No member of the Committee will be entitled to vote on a premium for which he is a competitor. All articles offered for premium must be the product of the ground or of the labor of the person presenting them.

No articles will be examined for premium, unless brought by the time above mentioned.

Inspecting Committee.

P. S. Van Rensselaer,
H. Croswell,
H. Green,
Jno. Meads,
B. P. Staats,
A. Blanchard,
P. V. Shankland,
I. Whalen,
E. Sayers.

Domestic Silk in South Carolina.—When on an excursion to the country a few days since, we found, much to our surprise and gratification, that some of our female friends had turned their attention to the culture of silk, and that many of them had made such progress in this laudable experiment as already to have realized considerable profit from the production of the raw material, and manufacturing it into cloth. Mrs. Patrick Calhoun, of this District, who, among her other many excellent virtues, is remarkable for her industry and attention to her matters of domestic concernment, showed us, in a house she had fitted up for the purpose, at least, we would say, one hundred thousand silk worms, all healthy and busily engaged, some of them in forming the cocoon, and others fitting themselves for the production of that valuable material. Mrs. Calhoun, who had tried the experiment last year on a smaller scale than she is doing the present, assured us that she had no doubt, should no unforeseen accident occur, she would be able to raise silk enough by the latter end of August to manufacture more than a hundred yards of cloth.

We know two other ladies in this District, Mrs. Covington and Mrs. Baskin, who have been similarly engaged for several years, and we have seen some pieces of silk cloth manufactured by them, which, when worked up into clothes, makes a beautiful and lasting dress. The cloth manufactured by them sold at this place for $3 per yard, and it is sought for with avidity, not only on account of its rarity, but also for its beauty, durability and cheapness. We hope that our ladies will turn their attention to this interesting, profitable, and laudable employment, and that we will be pardoned by those whose names we have given to the public, for having done so without their permission. —[Abbeville Whig.]

A VOICE FROM MOUNT AUBURN—THE NEW CEMETERY NEAR BOSTON.

BY MISS GOULD.

A voice from Mount Auburn! a voice!—and it said:
"Ye have chosen me out as a home for your dead;
From the bustle of life to have rendered me free;
My earth ye have hallowed—henceforth I shall be
A garden of graves, where your loved ones shall rest;
O, who will be the first to repose on my breast?

"I now must be peopled from life's busy sphere;
Ye may roam, but the end of your journey is here.
I shall call! I shall call! and the many will come
From the heart of your crowds to so peaceful a home.
The great and the good, and the young and the old,
In death's dreamless slumbers, my mansions will hold.

"To me shall the child his loved parent resign;
And, mother, the babe at thy breast must be mine!
The brother and sister for me are to part,
And the lover to break from each tie of the heart.
I shall rival the bridegroom, and take from his side,
To sleep in my bosom, his beautiful bride.

"And sweetly secure from all pain they shall lie
Where the dews gently fall, and the streams ripple by,
While the birds sing their hymns amid air-harps that sound
Thro' the boughs of the forest trees whispering around,
And flowers bright as Eden's at morning shall spread,
And, at eve, drop their leaves o'er the slumberer's bed.

"But this is all earthly! while thus ye enclose
A spot where your ashes in peace may repose—
Where the living may come and commune with the dead,
With God and his soul, and with reverence tread
On the sod, which he soon may be sleeping below:
Have ye chosen the home where your spirit shall go?

"Shall it dwell where the gardens of Paradise bloom,
And flowers are not opening to die on the tomb?
With the song of an angel, a vesture of light,
Shall it rise in a world free from shadow and blight:
Where the waters are pure, from a fount never sealed,
And the secrets of heaven are in glory revealed?

"A day hastens on—and an arm then shall break
The bars of the tomb—the dread trump shall awake
The dead from their sleep in the earth and the sea,
And, 'render up thine!' shall the sound be to me!
Prepare for that hour, that my people may stand
Unawed by the scene at the Judge's right hand."

METEOROLOGICAL RECORD, KEPT AT AVOYLLE FERRY, RED RIVER, LOU

For the months of March and April, 1833—(*Lat.* 31.10 *N.*, *Lon.* 91.59 *W. nearly.*)

[Communicated for the American Railroad Journal and Advocate of Internal Improvements.]

Date.	*Thermometer.*			*Wind.*	*Weather, Remarks, &c.*
1833.	Morn.	Noon.	Night.		
March 1	39	36	32	N—severe	cloudy—rain and spits of snow (the first this winter)
" 2	28	42	38	..	clear—calm evening—ice—martin birds appeared.
" 3	30	50	49	calm	.. all day
" 4	39	62	60	SE—light	cloudy—calm evening
" 5	52	60	62	calm	.. —rain all day
" 6	58	59	56	N	.. —rain in the morning—evening clear and calm
" 7	46	58	52	calm	.. —rain all day
" 8	48	59	58	N—severe	clear all day
" 9	40	66	63	calm	.. ..
" 10	47	70	66	S—light	.. ..
" 11	56	70	67	S—severe	cloudy all day
" 12	62	71	64	S	.. .. —calm and rain all night
" 13	60	58	56	calm	.. —rain in the morning
" 14	56	62	61	..	.. —rain all day
" 15	59	58	53	..	.. — .. .. and night remarkably heavy
" 16	58	62	62	..	foggy morning—rain and thunder severe all day and night
" 17	63	64	64	..	cloudy—rain and thunder all day and night, severe and heavy
" 18	65	66	64	S—severe	gales — .. ..
" 19	68	73	72	calm	.. —rain—light showers in the evening—wind S and light
" 20	60	70	74	W	cloudy—evening clear and calm
" 21	51	68	59	calm	clear all day and night—planted corn, beans, &c.
" 22	47	73	61	..	.. .. ..
" 23	56	68	62	..	.. — rain in the evening—wind NW and high all night
" 24	54	72	66	NW	.. — calm evening
" 25	54	71	65	calm	cloudy morning—clear day
" 26	54	74	64	..	clear—rain at night
" 27	60	71	65	..	cloudy—rain and thunder at night from NW, high
" 28	56	52	49	NW	.. —wind high all day and night
" 29	41	59	56	N—light	clear — .. .. —gathered turnip and mustard seed
" 30	40	61	58	E—light	.. —light white frost
" 31	42	66	67	NE—light	.. all day and night—Red River at a stand
April 1	58	63	64	SE—strong	cloudy—rain & thunder afternoon & night—gathered mustard & turnip seed
" 2	62	76	70	calm	foggy morning—clear day
" 3	55	80	71	..	clear—planted sweet potatoes, two acres
" 4	60	72	64	NE—light	.. all day—Red River rising
" 5	58	74	62	..	.. .. [severe till 12, midnight
" 6	60	66	62	SE—light	cloudy—light thunder showers all day—calm at night—rain and thunder
" 7	60	73	66	W	clear
" 8	51	76	63	calm	..
" 9	56	78	67	..	..
" 10	60	74	70	..	cloudy evening—wind S
" 11	68	75	69	S	.. all day
" 12	61	80	66	..	clear—cloudy night
" 13	58	72	62	NE	.. —evening, wind N, and heavy thunder and rain, and at night
" 14	56	58	60	NE—strong	cloudy—calm: late in evening and night
" 15	57	66	61	NE—light	.. morning—evening light showers and calm
" 16	58	70	64	W—light	cloudy—evening light showers and calm—peas ripe
" 17	57	72	61	NW—light	clear
" 18	58	76	67	N—light	.. —calm and cloudy night
" 19	58	74	68	E—light	cloudy—calm—clear evening and night
" 20	66	78	71	calm	.. morning— .. .. ..
" 21	65	82	77	..	clear
" 22	70	84	74	..	..
" 23	64	85	72	..	.. —at 5 p. m. shower and very heavy thunder
" 24	64	82	78	..	..
" 25	65	82	74	..	..
" 26	65	83	76	SE—light	cloudy morning—clear—calm day
" 27	66	81	73	SE—high	clear [then calm and cloudy
" 28	72	65	63	SE—severe	cloudy—at 12, noon, a severe gale and rain from W, continued until 4 p. m.—
" 29	65	80	74	calm	.. —even'g & night, heavy thunder showers—new potatoes fit for use
" 30	70	80	76	SE—light	clear—evening, wind high—sweet potatoes come up

Note.—Red River rose in March 2 ft. 10 in.; and in April it had risen 4 inches, which is within 3½ inches of extreme high water of 1828. *** The thermometer is exposed in a large gallery, opening to the east.

METEOROLOGICAL RECORD, KEPT IN THE CITY OF NEW-YORK,

During the Month ending on the 30th of June, 1833, inclusive.

Date.	Hours.	Thermomtr.	Barometer.	Winds.	Strength of Wind.	Clouds from what direction.	Weather.
June 1	6 a. m.	62	30·10	SW	moderate	WSW	fair
	10	68	30·13	WSW	..	..	..
	2 p. m.	75	30·10	SSW—S	..	..	..
	6	69	30·10	S—SSE	light	..	..
	10	66	30·09	S	..	..	cloudy
" 2	6 a. m.	58	30·08	SW	..	..	.. —thund'r & rain
	10	66	30·02	SSE	moderate	WSW / SSE	.. fair, with swift scuds fr SSE
	2 p. m.	76	29·90	..	..	WSW	
	6	70	29·80	..	..	..	.. —thund'r & rain
	10	70	29·78	S	..	..	.. —fair
" 3	6 a. m.	67	29·76	WSW—W	..	WSW / W	fair wind scuds fr W
	10	72	29·79	W	fresh	..	.. .. ..
	2 p. m.	80	29·80	NNW	..	..	.. .. ..
	6	66	29·91	..	..	NNW	.. .. ..
	10	53	29·08	..	moderate	..	.. .. from NNW
" 4	6 a. m.	50	30·15	N by W	..	W by S	..
	10	61	30·20	NNW—NNE	..	W by S / NE	..
	2 p. m.	66	30·20	N—NNW	light	W / N	..
	6	66	30·20	SSW	moderate	W by N	..
	10	60	30·22	WSW	..	..	..
" 5	6 a. m.	57	30·25	..	..	WNW	..
	10	72	30·28	SW	..	WNW / SSW	.. light scuds fr SSW
	2 p. m.	76	30·21	S	..	..	..
	6	68	30·15	..	..	W by N	..
	10	65	30·16	..	..	..	..
" 6	6 a. m.	67	30·09	SSW	light	..	cloudy
	10	65	30·06	SSE	..	..	rain
	2 p. m.	67	30·01	..	..	..	..
	6	64	29·99	S by E	..	WNW / S	cloudy
	10	62	29·95	..	..	..	..
" 7	6 a. m.	61	29·85	NNE	..	..	..
	10	64	29·88	ENE—E	..	..	rain —fair
	2 p. m.	66	29·81	E	..	..	cloudy
	6	66	29·80	..	..	..	..
	10	64	29·80	..	..	WNW	fair
" 8	6 a. m.	64	29·81	NNE	..	..	..
	10	66	29·85	ENE	moderate	..	hazy and foggy
	2 p. m.	68	29·80	SSE	..	..	..
	6	65	29·78	..	light	..	..
	10	62	29·77	..	..	W by S	..
" 9	6 a. m.	58	29·63	WSW—WNW	moderate	W by S / NW	fair
	10	65	29·62	NW	fr'h-str'g	..	..
	2 p. m.	66	29·65	NNW	fr'h-mod.	..	clear
	6	64	29·69	..	light	..	..
	10	59	29·72	..	..	..	..
" 10	6 a. m.	53	29·72	W—WSW	..	NW	..
	10	65	29·74	SW by W	..	WNW / SW	fair
	2 p. m	72	29·63	WSW	moderate	WNW	.. —cloudy
	6	68	29·63	WNW	..	..	cloudy
	10	58	29·68	NNW	..	..	fair
" 11	6 a. m.	56	29·70	NW—NNW	..	NW	..
	10	65	29·74	NW—W	fresh	..	..
	2 p. m.	72	29·75	..	..	..	..
	6	64	29·80	..	moderate	..	clear
	10	60	29·84	..	light	..	..
" 12	6 a. m.	55	29·95	WNW	..	..	fair
	10	66	29·98	..	moderate	WNW	..
	2 p. m.	74	29·97	W—WSW	..	..	..
	6	72	29·95	W	light	..	..
	10	68	30·00	..	..	W by N	.. cloudy at west
" 13	6 a. m.	61	30·03	ENE	..	W by S / WSW	..
	10	70	30·05	S—ENE	moderate	..	..
	2 p. m.	79	29·95	SSE	fresh	..	.. —cloudy
	6	71	29·87	..	moderate	W by N / WSW / S	cloudy
	10	69	29·80	..	..	..	.. -lightn'g-thun. st.
" 14	6 a. m.	68	29·80	WSW	..	WSW	fair
	10	74	29·80	..	..	W	..
	2 p. m.	80	29·77	..	light	..	cloudy—fair
	6	74	29·78	..	..	..	fair
	10	69	29·84	..	..	..	..
" 15	6 a. m.	65	29·84	..	faint	WSW	..
	10	72	29·84	SSW	light	WSW—W	..
	2 p. m.	79	29·78	..	..	WSW	..
	6	76	29·74	SSW—WSW	..	..	.. haze at NW
	10	72	29·74	WSW	..	..	hazy
" 16	6 a. m.	68	29·75	NW	moderate	NW	fair scuds from NW
	10	75	29·77	WNW	..	WNW	..
	2 p. m.	79	29·73	WSW	fresh	..	..
	6	75	29·71	SW	moderate	..	..
	10	70	29·75	..	..	..	..
" 17	6 a. m.	63	29·80	W—WNW	..	W	..
	10	70	29·85	NW	fresh	WNW	..
	2 p. m.	75	29·89	NNW	moderate	NW	..
	6	68	29·91	..	..		
	10	65	29·95				

Date.	Hours.	Thermomtr.	Barometer.	Winds.	Strength of Wind.	Clouds from what direction.	Weather.
June 18	6 a. m.	61	30·07	NNE—NE	moderate	NW / NE	fair
	10	66	30·15	ENE	..	NW / E / SW	..
	2 p. m.	72	30·18	S—SSE	..	WNW / NE	..
	6	67	30·15	SSE	..	NNW	..
	10	62	30·20	WSW	light	..	..
" 19	6 a. m.	60	30·20	..	..	NW / SW	..
	10	66	30·21	S—SSE	moderate	..	..
	2 p. m.	72	30·18	SSE	..	..	.. —cloudy
	6	67	30·12	ESE	fresh	..	cloudy —rainy
	10	66	30·15	..	..	..	rain
" 20	6 a. m.	65	30·09	SSE	moderate	..	rainy
	10	68	30·09	..	..	..	cloudy
	2 p. m.	71	30·10	..	..	..	..
	6	68	30·09	..	..	..	..
	10	67	30·09	..	..	..	..
" 21	6 a. m.	65	30·07	..	..	..	.. —rainy
	10	67	30·07	S by E	..	..	rain
	2 p. m.	68	30·07	..	..	..	..
	6	68	30·01	N	..	S / ENE	.. swift scuds fr NE
	10	65	29·98	..	..	..	cloudy
" 22	6 a. m.	65	29·99	NNW	..	NW	fair —cloudy
	10	70	29·98	..	..	..	..
	2 p. m.	78	29·97	..	..	..	.. shower at 3¼ o'c.
	6	74	29·95	..	..	..	..
	10	70	29·97	..	light	..	..
" 23	6 a. m.	68	29·98	NW	..	WNW	..
	10	76	29·97	..	..	..	..
	2 p. m.	81	29·96	W	..	..	..
	6	76	29·94	..	..	..	..
	10	70	29·93	..	..	..	cloudy
" 24	6 a. m.	66	29·88	E	..	SE	..
	10	65	29·90	ESE	moderate	..	..
	2 p. m.	68	29·80	..	..	..	rainy
	6	67	29·72	..	fresh	..	rain —heavy rain
	10	64	29·70	..	..	..	..
" 25	6 a. m	63	29·60	NW	moderate	SW / NW	cloudy —fair
	10	66	29·62	WNW—W	fresh	W by S	fair ..
	2 p. m.	70	29·62	WNW	..	..	..
	6	64	29·71	..	..	..	..
	10	60	29·75	..	..	..	cloudy
" 26	6 a. m.	59	29·80	NW—E	light	SW by N	rainy —rain
	10	62	29·82	E—WNW	faint	SW by W / WNW	fair —cloudy
	2 p. m.	62	29·80	N	..	..	cloudy —fair
	6	61	29·82	..	..	..	fair
	10	60	29·90	..	..	..	cloudy —fair
" 27	6 a. m.	61	29·91	W by S	moderate	WSW	fair
	10	66	29·98	WNW	..	..	..
	2 p. m.	70	30·03	..	..	..	..
	6	66	30·05	NW	..	..	..
	10	63	30·09	..	..	..	..
" 28	6 a. m.	58	30·11	NE	faint	..	..
	10	66	30·15	WSW	..	..	..
	2 p. m.	75	30·10	SSW	light	..	cloudy
	6	70	30·09	S	faint	..	.. —fair
	10	66	30·09	..	..	..	fair
" 29	6 a. m.	61	30·14	N	light	WNW	..
	10	68	30·15	NE	..	..	..
	2 p. m.	73	30·14	WSW	..	..	..
	6	72	30·11	SW	..	..	..
	10	68	30·13	..	..	..	..
" 30	6 a. m.	67	30·14	..	..	..	..
	10	72	30·19	..	..	..	..
	2 p. m.	80	30·12	S	moderate	..	..
	6	75	30·09	..	..		clear
	10	70	30·08	SW	..		..

Arithmetical mean of the thermometer for the month, 66.58.

Maximum height of the barometer in June, 30.28 in.—Minimum, 29.62 in.—Range 0.66 in.

The observations of surface winds for June are as follow: From the North-Eastern quarter, including N. 15—from the South-Eastern, including E. 32—from the South-Western, including S. 45—and from the North-Western, including W. 47.

The observations of the highest current of clouds have been as follow: From the North-Eastern quarter, 0—from the South-Eastern, 1—from the South-Western, 40—and from the North-Western, 68.

The prevalence of North-Westerly winds, both at the surface and in the upper current, have been greater than has been observed in any month during the present year. An unusual quantity of rain for the month of June has also fallen.

On the 2d day of June, tornadoes, hail-storms, and thunder-storms, appeared at various places in different parts of the United States. In the states of Maryland and Pennsylvania the most violent of these appeared in the afternoon; in the state of New-York and in New-England, in the evening. On the night previous a heavy tornado occurred in Illinois. Since that period, storms of this character have occurred in a few instances, particularly on the 17th, when a most severe tornado passed over Delaware county.

The heavy rain which fell in this city on the evening of the 24th June was some hours later in its occurrence in the eastern parts of Long Island Sound, as appears by the reports of the Providence steamboats. During this rain the wind was from ESE, being a direction nearly opposite to the progress of the rain. Heavy rain also fell at Cincinnati on the 23d and on the morning of the 24th, which may have been connected with that which fell here on the night of the 24th!

To READERS AND CORRESPONDENTS.—Should our readers not find the usual variety in this number, they will please to attribute it to the sickness of the Editor, and his absence from the city during most of the month. Several correspondents, likewise, are unnoticed.

PROGRESS OF AGRICULTURE IN ASIA.—Our records of the state of agriculture of the principal nations of Asia and Africa extend back into antiquity about 3,500 years. The machinery and the general state of agriculture and the arts were not materially different from what they are now. Egypt, indeed, is now beginning to show indications of progressive greatness; but in all the rest of the once celebrated eastern empires every thing is stationary. Under the influence of the progress of Christianity and letters, we may expect far greater improvements in the next fifty years than have been made in the previous 3500.

USES OF THE POTATO.—Every year this invaluable vegetable is applied to some new use.

A patent has been procured at Paris, a gold medal granted, and other honorary distinctions conferred, for the discovery and practice, on a large scale, of preparing from potatoes a fine flour or sago, equal to ground rice, and a *semolina* or paste, of which one pound is equal to one and a half pounds of rice, one pound and three quarters of vermicelli, or, as it is asserted, to eight pounds of raw potatoes. Large engagements have been made for the French marine, and for the military and general hospitals, where it is found serviceable as a nutricious aid with wheaten flour for biscuits, pastry, soups, gruel, and panada. Count de Chabrol states that 40,000 tons of potatoes are annually manufactured into flour, in a circle of eight leagues round Paris. The manner of preparation is not known, but Mr. M'Innes states in the Quarterly Journal of Agriculture his method of preparing tapioca, which is presumed to be somewhat similar to the French mode. The potatoes are grated into water, and the mass is passed through different strainers and waters until it is perfectly purified from the fibrous matter, and the starch becomes pure and clean. It is then exposed to dry, after which it is dried over a heat of the temperature of 150 degrees, and made into cakes till needed for use. It is used in bread, puddings, &c. generally with a portion of wheaten flour.—[Quarterly Journal of Agriculture, vol. 11, p. 68.]

SAGACITY OF THE HORSE.—Our readers cannot fail of being pleased with the following:

An incident occurred in one of our streets this forenoon well calculated to excite admiration for that noblest of animals, the horse. A fine large dark bay, that is seen daily in our streets attached to Mr. John Taylor's beer dray, was standing in front of Mr. Usher's grocery in Division street. A load of hay coming up Division st. was obstructed by the dray. As the waggon came up to the dray, the man upon his load of hay said, "*get out of the way.*" The dray-horse looked round, and seeing that he blocked up the street, moved round the corner of Division into Greene street, and, after the waggon had passed, *backed his dray round into Division street and resumed the exact position which he left to enable the waggon to pass!* The drayman was not present, no person touched a rein, nor was a word spoken to the horse, except by the waggoner, who ordered him to "*get out of the way.*"—[Albany Evening Journal.]

NEW-ORLEANS.—The following remarks in reference to this growing city are from a correspondent of the Portland Advertiser:

New-Orleans, by and by, will be healthy, comparatively speaking. When the streets are paved, and well drained, and water is forced up from the Mississippi so as to run through all the streets, it cannot be otherwise than agreeable. It will be, strange as the declaration may seem, one of the most beautiful cities in the Union. The parks are numerous, and some of them are now very inviting. Fine sycamores and cotton trees shade flourishing grass-plats, and some of them are in the heart of the city. The streets are regularly laid out; they cross each other at right angles. The late built houses are fine buildings, some with porticoes, some with balconies, and a few with gardens. Many, very many buildings are going up. Every thing has a business and a flourishing air. Some few of the dwelling houses are superb; some few of the stores are also very fine. Indeed, there is but little difference in general appearance, so far as buildings are concerned, between this and Baltimore or Boston, though there are no such granite and public buildings as there are in Boston. Brick is the chief material used,—brick imported from the north, or poor brick made here from the clay dug up from the deposits of the Mississippi.

New-Orleans in our better estimation is badly supplied with water. There are no wells, for water is within two feet of the earth, but putrid, dirty water, noxious and offensive, which is hardly fit to sprinkle the streets. The water used for cooking and drinking is the rain water filtered, as good water as I want, and far better than one commonly gets, or water from the Mississippi. When ice is put into this water it is as good as one can desire. A corporation, I understand, have in contemplation the establishment of water-works after the plan of the water-works on the Schuylkill, which supply Philadelphia with water. This is a great desideratum.

REVENGEFUL HORSE.—Aristotle, Varro, and Pliny, relate the following remarkable circumstance: A horse, which could not be induced to cover his dam, was blindfolded and compelled to do it by the groom. After his eyes were uncovered he attacked and killed the groom.

LIVE OAK IN THE UNITED STATES.—A friend has sent us the following selected article on the live oak, the material of our navy:

A report has been communicated to the House of Representatives by the Secretary of the Navy upon the subject of Live Oak, which contains many interesting facts. The whole amount of the supply of this material is estimated by the Secretary at about eight million cubic feet, at a medium calculation of fifty feet per tree. The whole quantity employed in the construction of public vessels since 1797 is estimated at 974,363 cubic feet, of which all but 132,250 feet are contained in the vessels now in commission, in ordinary, or on the stocks. Of the deficiency 8,000 feet were sold by order of Congress in 1801; 68,375 were captured by the enemy; 54,500 were burnt at the navy-yard in Washington in 1824; 3,375 have been lost by shipwreck; and 6,000 by natural decay. The stock now in depot at the several yards is 431,845 cubic feet. Of the amount growing on public and private lands, one fourth is supposed to be fit for the construction of ships of the line, one fourth for frigates, and the residue for sloops and schooners. For the repair of all vessels in ordinary and commission, 27,000 feet are required annually; the annual purchases, which have amounted to 38,000, having been required to be applied to the building of new vessels. There have been reserved from sale 67,417 acres of live oak timber lands, and a farther reservation of 100,000 acres is recommended by the Secretary. With the view of preventing plunder of the timber growing on the public lands, he recommends that the masters of all vessels which have it on board on private account, shall be held to prove that the timber was taken from private lands, before being admitted to a clearance at the custom-houses.

THE TURNIP FLY.—A board about 18 inches in breadth, and sufficiently long to cover four ridges of turnips, was made to run upon wheels, high enough to allow the board to pass over the turnips without touching the tops of them; the lower side of this board was painted with white paint, which the men provided themselves with and took into the field, and during the night (at which time I understand the fly is more vigorous and destructive than during the day) the instrument was wheeled from one end of the field to the other. The insects, on being disturbed, of course immediately fly or jump up, and stick to the paint; and I was assured that at the end of every set of ridges, the board was almost covered with them. The remedy appears to be a very simple one, but it may nevertheless prove in some measure efficacious. Should that, on further trial, prove to be the case, I shall consider myself very much favored in having been enabled to be the means of its becoming more generally known.—[Correspondence in Doncaster Gazette.]

OIL FROM COTTON.—Among the discoveries of the present age that tend very directly to increase our agricultural prosperity, is the obtaining of a useful oil from cotton seed. The following details, from the Richmond Compiler, give some idea of the importance of this manufacture:

We have called the attention of our readers several times to the very useful art discovered by Messrs. Smith & Follet, of Petersburg, of hulling the cotton seed and extracting oil from the kernel. We observe by the Natchez Journal, of the 3d inst. that it is about to be applied on a very large scale in the west, where cotton is raised, and the seed may be obtained in the greatest quantity. We had heard of this establishment being about to be made in the west, under a patent right purchased by Messrs. A. Plummer & Co. of Messrs. Smith & Follet. The Journal informs us, that the company have erected at Natchez a substantial building, eighty-four feet by eighty, and one and a half stories, which comprises a steam engine of twenty-two and a half inch cylinder, and five feet stroke, driving eight hulling machines, five set of stones, and a machine to prepare and grind the kernel for heating; eight cylinders for heating the meal; a carn, and seven lever presses in proportion.

It is the largest establishment for making oil in the United States, and capable of making from one to two thousand gallons per day. There are but two other cotton seed oil factories in the Union, one in Petersburg, and the other in North Carolina, "scarcely more than a tenth as large" as that which Mr. Plummer has established in the city of Natchez.

It is ascertained that *one bushel of seed will make three quarts of oil.* It is said to be "among the best of paint oils, it is easily refined, it answers as well as the very best winter strained sperm oil for lamps, without the least disagreeable smell, answering admirably well for woollens, machinery, &c." Exclusive of the oil, the cake is the very best of food for cattle, &c. The planters have given every facility in their power for supplying seed chiefly to the mill, and have promised to save the seed of their present crop, and on the best terms, for the new establishment.

Mr. Plummer has made arrangements for making a similar establishment in Florence, and also one in Mobile, state of Alabama.

We cannot entertain a doubt that this manufacture will be eminently profitable to the proprietor and useful to the public. We were favored during the last autumn with specimens of the oil from the Petersburg factory. The one was the first extract from the seed, of a yellowish hue, and very transparent. The other was the refined oil, which was as limpid and clear and light colored as water itself. It seemed admirably calculated for painting, lamps, &c.

THE CHINESE METHOD OF PROPAGATING FRUIT TREES BY ABSCISSION.—The Chinese, instead of raising fruit trees from seeds, or from

grafts, as is the custom in Europe, have adopted the following method of increasing them:

They select a tree of that species which they wish to propagate, and fix upon such a branch as will least injure or disfigure the tree by its removal. Round the branch, and as near as they can conveniently to its junction with the trunk, they wind a rope, made of straw, besmeared with cow-dung, until a ball is formed, five or six times the diameter of the branch. This is intended as a bed into which the young roots may shoot. Having performed this part of the operation, they immediately, under the ball, divide the bark down to the wood for nearly two-thirds of the circumference of the branch. A cocoa-nut shell, or small pot, is then hung over the ball, with a hole in its bottom so small that water put into it will fall only in drops. By this the rope is kept continually moist. During three succeeding weeks nothing farther is required, except to supply the vessel with water. At the expiration of that period one third of the remaining bark is cut off, and the former incision is carried considerably deeper into the wood, as by this time it is expected that some roots have struck into the rope, and are giving their assistance in support of the branch.

After a similar period the operation is repeated, and in about two months from the commencement of the process, the roots may generally be seen intersecting each other on the surface of the ball, which is a sign that they are sufficiently advanced to admit of the separation of the branch from the tree. This is best done by sawing it off at the incision. Care must be taken that the rope, which by this time is nearly rotten, is not shaken by the motion. The branch is then planted as a young tree.

AGE OF SHEEP.—The age of sheep may be known by examining their front teeth. They are eight in number, and appear during the first year all of a small size. In the second year, the two middle ones fall out, and their place is supplied by two new teeth, which are easily distinguished by being of a larger size. In the third year two other small teeth, one from each side, drop out and are replaced by two large ones; so that there are now four large teeth in the middle, and two pointed ones on each side. In the fourth year the large teeth are six in number, and only two small ones remain, one at each end of the range. In the fifth year the remaining small teeth are lost, and the whole front teeth are large. In the sixth year the whole begin to be broken; and in the seventh, sometimes sooner, some fall out or are broken.—[Penny Mag.]

TRAINING OXEN TO BACK.—Mr. Holmes: I have observed that very little, if any attention, is paid by our farmers to learn their steers to back; but as they become able to draw a considerable load forward, they are often unmercifully beaten on the head and face, because they will not back a cart or sled, with as large a load on as they can draw forward, forgetting that much pains have been taken to learn them to draw well forward, and none to learn them to push backward. To remedy the occasion of this thumping, and the delay, which is always disagreeable, as soon as I have learned my steers to be handy, as it is called, and to draw forward, I place them on a cart, where the land is descending in a small degree. In this situation they will soon learn with ease to back it; then I place them on level land, and exercise them there; then I learn them to back the cart up land a little rising. The cart having no load in it thus far. When I have learned them to stand up to the tongue as they ought, and back an empty cart, I next either put a small weight in the cart, or take them where the land rises faster, which answers the same purpose. Thus in a few days they can be learned to back well, and know how to do it, which by a little use afterwards they will never forget. This may appear of little consequence to some, but when it is remembered how frequently we want to back a load when we are at work with our cattle, and how commodious it is often to have our cattle back well, why should we not learn them, for the time when we want them thus to lay out their strength. Besides it saves the blows and vexation often encountered, which is considerable when one is in haste. It is a merciful course towards our brutes. I never consider a pair of oxen well broke until they will back with ease any reasonable load, and I would give a considerable sum more for a yoke of oxen thus tutored, than for a yoke not thus trained. A TEAMSTER.

THE BULL.—The object of the breeder must always govern the description of bull required, but, to arrive at excellence, there is one form essential to all, and which is described by Culley as follows:—The head of the bull should be rather long, and muzzle fine; his eyes lively and prominent, his ears long and thin, his horns white, his neck rising with a gentle curve from the shoulders, and small and fine where it joins the head; his shoulders moderately broad at the top, joining full to his chine and chest, backwards, and to the neck vein backwards; his bosom open, breast broad and projecting well before his legs; his arms or fore-thighs muscular and tapering to the knee; his legs straight, clean, and very fine bone; his chine and chest so full as to leave no hollows behind the shoulders; the plates strong, to keep his belly from sinking below the level of his breast; his back or loin, broad, straight, and flat; his ribs rising one above another in such manner that the last rib shall be rather the highest, leaving a small space to the hips or huckles, the whole forming a round or barrel-like carcase: his hips should be wide placed, rounder, globular, and a little higher than the back; the quarters, from the hip to the rump, long, and instead of being square, as recommended by some, they should taper gradually from the hips backwards, and the turls or pot bones not in the least protuberant; rumps close to the tail; the tail broad, well haired, and set on so high as to be in the same horizontal line with the back.

A bull is in possession of his generative powers, and is competent to be used with two-year old heifers at fifteen months; but it is not advisable to permit him to cohabit with large cows until he is arrived at a greater strength. It is proved by practice that the produce of a bull of fifteen months is equally stout and healthy as that produced from a bull of greater age. To a young bull we would not advise more than ten or twelve heifers; but the numbers increased till he is four years old, at which age the bull may be considered in possession of his greatest powers. The cow and ox attain their full age at seven years. Bulls, when let loose with cows, are very much in the habit of not confining themselves to those allotted to their charge, but roam away and visit others; to prevent this they are by some breeders tied up in a pen or stall, and fed during the summer on cut grass, clover, or any other green food, and in winter on hay. When required, they are let out to the cows. Others let them run with the cows throughout the year, and some work them with the oxen, but the latter is by no means recommended, as the bulls are generally vicious with oxen, and generally do mischief by goring them. The working of a well-trained bull, however, may be found advantageous on a small farm, where his labor is of consideration.

RAPID MODE OF RAISING EXCELLENT VINE PLANTS.—At the pruning season leave a shoot of young strong wood, over and above what may be wanted for training it, of a sufficient length to bend down as a layer into a pot; and also for training, during its growth, when the vine begins to push, displace the buds from the shoot intended for laying, except the leading one. When this is grown to about all eight inches or one foot long, bend down to the pot, and lay it so that the top joint, whence the young shoot has sprung, may be fixed with a strong crook at about one inch under the surface of the mould. As soon as it begins to take root, weaken its resources from the mother plant, by making an incision in the wood behind the pot, which enlarge by degrees, as fast as the young plant will bear it, until it is quite separated from the old one.—[Gard. Mag.]

FRUIT AND FRIENDSHIP.—When only a few individuals in a village or neighborhood cultivate choice fruits and plants, and that too in any considerable quantity, it is quite amusing to see with what kindness many persons, who previously have been almost perfect strangers, now become their most intimate and particular friends. As the fruit season arrives, they receive a multitude of calls from most *obliging acquaintances*, who are peculiarly solicitous about the health of their families, and are always happy to drop in and taste their choice fruits, and be on exceedingly intimate terms with them at that *particular season* of the year. But let that season pass, and the once thronged and hospitable door, where so much *disinterested friendship* has been recently professed, becomes silent as the Capulets' tomb! I once knew a gentleman, who cultivated a large peach and plum garden, which yielded him great abundance, and it cost him hundreds of dollars a year to give them away, in receiving genteel visits and tea drinkings during the fruit season, from persons he little knew, and who cared not a fig about him. I have known others too, who were so continually annoyed with the importunity of their neglectful neighbors in begging their fruits, that in self-defence they were obliged to cut down and cast away, like the barren fig, beautiful trees, to prevent offence by refusing to have their fences destroyed and grounds trodden over, and to suffer the various inconveniences which the presence of their fruit subjected them to. These instances, I am happy to say, are becoming less frequent, and it is with pleasure that they need no personal application within my present knowledge of our neighborhood; and in well bred communities, the right of the cultivator to his productions is as strictly recognised, as that of the merchant to his goods, or the banker to his purse. Public opinion is rapidly correcting these errors, and "it were a consummation devoutly to be wished," that the rich and luxurious fruits of our land should become as plenty and as cheap as our soil and climate are susceptible of producing them.

OIL OF PUMPKIN SEEDS.—It is well known to some that the Pumpkin Seeds furnish a good sweet oil, and some oil of it has been made in many parts, which I have seen and tasted; but it is not generally known how good and profitable a crop it may afford. We commonly plant pumpkins among the corn, and thus get a double crop, but we may have a triple crop by saving the seeds and making oil of them; which may be done as easily as linseed oil. One acre can thus give from fifty to one hundred gallons of sweet oil, besides the corn and pumpkin flesh. It might even be worth while to cultivate pumpkins alone, and thus raise from 200 to 300 gallons of sweet oil per acre, worth from fifty cents to one dollar the gallon. There is no trouble in the cultivation; no plant is easier raised, no oil is easier made by cold pressing. Cattle and fowls will eat the cakes after pressing. The oil is pale, tasteless and sweet, good for salads, to fry, to cook, and to burn in lamps, but it is not good for paints, being fat and not siccative. 100 lbs. of seeds produce 32 to 36 lbs. of oil, and I verily believe that one acre filled with pumpkins might be made to produce upwards of 12,000 lbs. of seeds, or 4,000 lbs. of oil, equal to about 500 gallons. We want very much in the United States a cheap native oil—we can have it every where from the pumpkin seeds. Let enterprising farmers try a few acres and publish the results.—[Gen. Farmer.]

TO DESTROY CATTEPILLARS.—A mode of destroying caterpillars has been discovered by accident. A piece of woollen rag had been blown by the wind into a currant bush, and

when taken out was found covered by these leaf devouring insects. Pieces of woollen cloth were immediately placed on every bush in the garden, and the next day the caterpillars had universally taken to them for shelter. In this way thousands were destroyed every morning.

WINTHROP, April 17, 1833.

RAISING PEAS FOR SWINE.—In the year 1805 I purchased the farm where I now live, on which there was not more than four and a half tons of hay cut the first year I improved it, although there were many acres mowed over. I ploughed the spear grass sward, and put on one and a half bushels of plaster per acre, and sowed to peas, and peas and oats. I had the Newbury white breed of hogs. I turned them into the peas when in the milk, or rather a little before, when they were so tender that the hogs would eat pods and all.

I kept them in these, by fencing a small enclosure, until all the peas were eaten; then moved the fence to a fresh portion. Two boards in height were sufficient for that breed. By two or three sowings I was enabled to feed them in this way during August and September.

I then mowed my peas and oats, and while they were becoming sufficiently dry to thrash, I picked the pods from those stakes which had the most upon them, and gave them to my hogs in the yard, and when Indian corn was harvested, I gave them the small corn. Immediately after harvesting Indian corn, I threshed my peas and oats, and had them ground, set a half hogshead on the south side of the house, and mixed up a quantity of the meal for the hogs, adding steamed or boiled potatoes, taking care not to let the mixture sour, but to get into a raised or slightly fermenting state. The course adopted by me of turning the hogs into the peas often occasioned some mistakes, for many a time would some kind good-hearted person call and tell me, very earnestly, that *the hogs were in the peas.*

I relied upon the sale of pork to pay a hired hand, and did it for a number of years.

I afterwards came into the possession of another farm, from which I brought the hay and spent it on the one where I lived. I was thus enabled to manure highly, my peas ran to vines, and I gave up the raising of them for other crops. I am now about ploughing a back field and introducing the same mode of culture, it being too much labor to cart the manure to it. I was probably the first who introduced this kind of culture in the county, and I suffered from ignorance as to the quantity of seed necessary to be used. I have now eight bushels of peas to be sown this year, and shall sow them in the following manner: of those that are intended to be eaten off, I shall sow one and a half bushel of peas, and a half bushel of oats, (the oats well incorporated or mixed with the peas, to hold them up when growing.)

If intended to be cut as peas and oats, I shall sow five pecks of peas and a bushel of oats; more peas ought to be sowed than oats, for the oats will gain on the peas. I find that the peas and oats ought to be raised together for a number of years, that they might ripen at the same time. I consider the pea and oat crop as the most convenient and valuable crop that I can raise; as food for hogs and horses, it surely is the first. With respect, yours, E. WOOD.

[Maine Farmer.]

PROSPECTS OF THE WEST.—A late Illinois paper states, that although 100,761 bushels of wheat were sent from Buffalo, N. Y, east, on the canal, last season, and 21,932 barrels of flour past in the same direction from that city, all this amount will not quite equal one third of the anticipated wheat crop in Sangamo and Morgan counties the coming season. It is estimated that the wheat of these counties, should no disaster attend the crop, will be more than a million of bushels. They fear no competition in market; Illinois wheat will always find sale when there is any demand for the article. It is by far the heaviest wheat, per bushel, raised in the United States.

LIGHTNING CONDUCTORS.—It is fancied that it is quite sufficient to put up an iron rod, with one end in the ground and the other a few feet higher than the roof, to protect a building from lightning. It should be impressed on the public that conductors, unless perfectly insulated, are calculated to produce the disaster they are intended to prevent. The best mode of insulating them is for them to pass through glass rings, and in no part to be in contact with any thing but glass. The lightning conductors placed on the Royal Exchange at Paris are a perfect model in this respect.—[Penny Mag.]

THE STRIPED HOUSAINEE MELON is, to the present day, scarcely known in this country; in fact, it was not at all known, until Mr. Knight gave a description of it in the Horticultural Transactions of 1831.

The Striped Housainee Melon is a noble fruit, one of great beauty and excellence: its skin is firm, but thin; the rind under it, and the fleshy cellular substance adjoining, to the depth of rather more than the eighth of an inch, is of a bright green, gradually becoming paler, till it meets and blends with a bulk of the flesh, which is of a pinkish buff, or salmon color; the green portion is not *quite* so tender and juicy as the internal substance; but the whole may be eaten so as to have nothing remaining but the thin exterior integument: there is no defraud in this fine fruit, all is juicy and eatable, the flavor is delicious, the odor that of a fragrant apple, and the fruit will long remain good without decay.

In its form this melon resembles an egg, the stalk end being more enlarged than that of the blossom. It is, during its early growth, of a dark green color, but, as its age advances, the stripes become very apparent; they are of a full sombre green, and divide the surface into distinct marked portions, leaving it, however, perfectly free from grooves or furrows; and hence this variety may be styled *a smooth melon*, although it finally becomes reticulated with an ash-grey colored net-work. When near to maturity, small greenish yellow spots are manifest among the interstices of the netting, and a clear yellow circle surrounds the part at the insertion of the footstalk. There is no determinate change of color, that absolutely marks the state of perfect maturity, at least I have not perceived such; the general tint appears to me to be a glaucous or sea-green, covered more or less with a pale greyish tissue of vermicular reticulations. In some individuals, the green stripes remain very conspicuous to the last: in others, they become almost obliterated.

The *plant*, in *its habit of growth*, is one of the finest and most interesting objects imaginable. The stem, if led perpendicularly up to the height of three feet, will comprise about ten clear joints. From each joint, at its angle, a noble leaf nearly a foot in diameter is produced; it is supported by a *petiole* (footstalk) about ten inches in length, that takes a most graceful double bend, in figure resembling the branch of a chandelier. The plate of the leaf is of a most vivid green, its surface rough, with short bristly hairs. In shape it is obtusely heart shaped, and very broad near the base. From the axles of these leaves, lateral shoots would naturally be sent forth, but each of these is to be removed to a certain height, for a reason that will in due time be assigned.

The *flowers* both male and female are small, frequently not exceeding three-fourths of an inch in diameter, at the extreme edges of the *limbus* or border; they are of a sulphur or pale yellow color, rather few in number. The males, as far as my observation extends, are produced somewhat before the fertile blossoms, and this appears to be a wise provision of nature, to insure the safety and perfection of the fruit; the melons formed *above* the tenth joint are generally found to set with greater certainty, and to grow to a greater size than others that appear during the infantile state of the plant, nearer to its roots.

"The Housainee Melon," as Mr. Knight justly observes, is upon the whole "of very easy culture," and the plant very productive of fruit; but "that it is very long in ripening." When ripe, however, he adds, "it *remains in perfection*, a very valuable quality to the fruiterer." Another feature, and one that he deems of great moment, is, that "the natural habits of the plant, which he feared would not prove *permanent*, he has found to be strictly so." I have quoted his own words to me, merely changing the person, and I may add, that the only circumstance worthy of real regret is, that the fruit is not only tardy, but somewhat irregular in the period of its ripening.—[Horticultural Register.]

RUTA BAGA.—Last spring I prepared one hundred and two roods of land for a crop of ruta baga, where had been grown the year previous a crop of potatoes. It was twice ploughed, then harrowed and rolled: afterwards furrows were made about three feet apart, into which manure was thrown, at the rate of about twenty loads per acre. A deep furrow was then thrown on each side the manure, by a strong ox team, forming a high ridge directly over it. Next a slight drill was made on the top of the ridge, and a little fine manure thinly scattered along, and, after dropping, the seed was covered; which completed the manner of sowing. This last operation of manuring is very important, in order that the young plant may be forced into its second leaf, when it is not so liable to be cut off by the fly—so often destructive of this crop.

The preparation of the land, and the manuring and sowing, is the principal labor required, the after culture and harvesting being comparatively very light; the one is performed in dull hay weather, when the hands cannot be otherwise properly employed, and the ingathering of the crop may be delayed till after all others are secured, as it will bear a hard frost without injury. This is done with great rapidity. One man can easily cut the tops off, pull up and throw into a cart, one hundred and twenty bushels in a day.

The quantity raised on the one hundred and two roods is five hundred and fifty bushels—equal to eight hundred and sixty-two bushels to an acre.

But the most interesting inquiries to the practical farmer are yet to be considered, viz.: what is the expense of cultivation, and what is the value of the crop.

It will be already seen, that the expense of labor and manuring is considerable. From the best estimation I can form, without having kept any exact account, I should say, that the value of manure expended is equal to - - $20 00
Labor, - - - - - - - 25 *00*

Making $45 00

My theory as to the value is this: I estimate the saving of hay in (using 550 bushels) feeding sheep, equal to eight tons, which, at nine dollars per ton, amounts to - - - - - - - $72 00

Feeding will commence about the first of March, of three hundred ewe sheep a month previous to yeaning time, and the condition of the sheep will be so much bettered, by turnips and hay, instead of feeding with hay only, that ten lambs will be saved for every one hundred sheep—being thirty at one dollar each, - - - - - - - - 30 00

$102 00
deducting 45, the expense of cultivat'n, 45 00

leaves a profit of - - - $ 57 00
or at the rate of eighty-nine dollars and forty-cents per acre.

The following article is, says our respected correspondent, to whom we are indebted for the pamphlet from which it is taken, "of great value, as the authority is unquestioned."

On the Cultivation of Rye. By JOHN KEELY.

To the Trustees of the Essex Agricultural Society.

GENTLEMEN,—Having for some years past been more than commonly successful in raising large crops of winter rye by a process of cultivation which, I believe, is entirely new, I have been induced, by the suggestion of some gentlemen whose judgment I very much respect, to submit for your consideration a statement of the mode of culture, with the produce. And that the success of the experiment this season may not appear to be altogether accidental, it will, perhaps, be as well to communicate the result of the process for the three or four previous years.

The land on which the experiment has been conducted is situated on the Merrimack, about a mile and a half east of Haverhill bridge; and came into possession of my father in 1827. The soil is a sand, approaching to loam as it recedes from the river. Perhaps the term *plain land* (by which it usually passes) will better convey an idea of the quality of the soil. It is altogether too light for grass. The crops we find most profitable to cultivate on it are winter rye, Indian corn, potatoes, and to some extent turnips. Oats might probably be raised to advantage, were it not that the land is completely filled with the weed commonly called charlick, which renders it entirely unfit for any spring crop, excepting such as can be hoed. The crops of rye, on the neighboring soil of the same nature, vary, I believe, from seven or eight to twelve or thirteen bushels per acre, according to the cultivation, and their approximation to the river. We usually raise on land from thirteen to thirty bushels of Indian corn per acre. Potatoes are very good in quality, but the quantity is quite small; not sufficient to be profitable, were it not that the land is very easily cultivated.

In the summer of 1827, we sowed three bushels of winter rye near the river, on about two acres of land, which produced twenty-eight bushels.

In 1828, we sowed four bushels on four acres of land running the whole extent of the plain from the river. This piece was sowed in the spring with oats; but they were completely smothered with charlick, and about the middle of June, the whole crop was mowed to prevent the charlick seeding. By about the middle of August, a second crop of charlick having covered the land, it was ploughed very carefully, in order completely to bury the charlick; and then suffered to remain until the 15th of September, when we began sowing the rye in the following manner. A strip of land about twelve yards wide was ploughed very evenly, to prevent deep gutters between the furrows, and the seed immediately sown upon the furrow and harrowed in. Then another strip of the same width, and so on until the whole was finished. We found the oat stubble and charlick entirely rotted, and the land appeared as if it had been well manured, though none had been applied to this part since it had been in our possession. The rye sprung very quick and vigorously, having evidently derived great benefit from being sown and sprouted before the moisture supplied by the decaying vegetable matter in the soil had evaporated to any considerable extent. This crop produced 133 bushels.

In 1829, the charlick was suffered to grow on the land appropriated to rye, until it had attained its growth and was in full blossom. The land was then ploughed very carefully, and the charlick completely covered in. In a short time a second crop appeared more vigorous than the first. This also was allowed to attain its growth, and then ploughed in as before. A third crop soon appeared, which of course was destroyed, when the land was again ploughed for sowing about the middle of September. This piece of land was a parallel strip running from the river, and containing two acres. Two bushels of rye were sowed. The crop presented a remarkably promising appearance, and yielded seventy-four and a half bushels.

In 1830, the land appropriated to rye included nearly all the lighter part of the soil, and owing to a pressure of business was not attended to as we could have wished. It was ploughed in the early part of the summer. But harrowing to destroy the weeds was substituted for the second ploughing. This, and the unusual blight which affected all the grain in this part of the country, led us to anticipate a small crop. It yielded however fifteen bushels to the acre.

The land on which the crop of rye was raised the present season had for the three or four previous years been planted with Indian corn: and owing to the extent of our tillage land, we have not been able to apply more than four or five loads of manure to the acre this season. The charlick was suffered to attain its growth as usual; and on the 18th and 19th of June it was carefully ploughed in. The second crop was ploughed in on the 6th and 7th of August. On the 14th and 15th of September it was sowed in the usual manner, namely, a small strip of land was ploughed, and the seed sown immediately upon the furrow, and then harrowed in. Then another strip of land was ploughed, and so on until the whole was completed. One bushel per acre was sowed as usual. The seed was originally obtained from a farmer in this vicinity, and I suppose is similar to that which is generally used. We have never prepared our seed in any manner, but have directed our attention solely to the preparation of the land; and to this we attribute our success. Owing to the unusual severity of the winter, the crop was considerably winter killed, but recovered very soon in the spring, excepting in the midfurrows. There, as the land lies very level, the water settled, and so completely destroyed the rye that they continued bare the whole season. This would of course cause some diminution in the crop; perhaps a bushel or two. The rye was reaped at the usual season, and, as the weather was favorable, immediately put into the barn. The land contained one acre and thirteen rods, and yielded *forty-six bushels and three pecks. A remarkably fine sample.*

In entering a claim for your premium, I would ask your attention particularly to the process of cultivation. It is I believe entirely new, and capable of general application.

Sowing the seed immediately after the plough we consider very advantageous to the crop. The soil being then moist, causes the seed to spring immediately, and gives a forwardness and vigor to the plants which they ever after retain.

The process of ploughing in *three* crops of weeds before the seed is sown, very much enriches the soil. It would be altogether unnecessary to attempt to refute the notion, that by such a process nothing more is applied to the soil than was before derived from it. If one could not discover by the light which Chemistry has shed upon the subject of Agriculture, sufficient *reasons* for the contrary conclusion, observation, one would think, would be sufficient to convince any intelligent man of the fact.

And here I would suggest that I do not consider the experiment, as we have conducted it, quite complete. To render it more so, in the first place, in ploughing in the weeds, I would not turn a furrow after the dew had evaporated. I have no doubt but that a large portion of that fertilizing quality in the soil, which (during the summer months) is continually exhaled from the earth, is by the dew brought again within our reach, and it would be wise to avail ourselves of the opportunity of again burying it in the soil. And in the second place, I would by all means use a heavy roll after each ploughing. It would fill all the cavities left by the plough, and by pressing the soil more closely to the weeds, at once hasten their decomposition and very much retard the evaporation from the soil.

But the land is not only very much enriched by this process. There is, I conceive, no method by which it can be so effectually cleaned. Three times during the season a fresh surface is presented to the atmosphere, and each time, as the decaying vegetable matter increases in the soil, so is the exciting cause augmented to make a more vigorous effort. We have in this manner gone over nearly all our land which is infested with charlick, and the diminution of the weeds is quite sufficient to warrant the expectation, that in a few years it may be comparatively eradicated. Very respectfully,

JOHN KEELY.

Haverhill, Sept. 22, 1832.

The undersigned having assisted in measuring the rye, an account of which is given above, hereby certify that the quantity is as there stated, namely, forty-six bushels and three pecks.

JOHN KEELY,
THOMAS E. KEELY,
SAMUEL THOMPSON.

I have this day measured a lot of land belonging to Mr. Keely, on which is a crop of rye, and find it to contain one acre and thirteen rods. C. WHITE, Surveyor.

Haverhill, Aug. 1, 1832.

At a Meeting of the Trustees of the Essex Agricultural Society, January 1, 1833, the foregoing statement having been read and examined,

Voted, That the first premium offered for the cultivation of rye be awarded to Mr. Keely.

Attest. J. W. PROCTOR, Secretary.

FARMS FOR THE POOR.—At this time, when the attention of the public is drawn to the subject of checking the increase of mendicity, and of alleviating the condition of the poorer classes of the community, all information tending to render these benevolent subjects attainable cannot fail of being interesting to our readers. Mr. Jacob, the reporter on the English corn trade, has given an interesting account of establishments for these purposes in Holland. Our friend and correspondent A. W. has sent us the following selected notice of Mr. Jacob's report:

The originator of the scheme was General Van den Bosch. The General, while in the island of Java, had formed a connexion with a Chinese Mandarin, whose skill in farming he had admired, and who had under him a colony of emigrant Chinese. On his return to Europe, General Van den Bosch laid before the King of the Netherlands a plan for a pauper establishment, which at once met with the royal patronage. A public meeting was held at the Hague in 1818, and a Society of Beneficence formed, and two committees organized for its management. The first, or Committee of Beneficence, consists of twelve members; or a president, two assistants or assessors, and nine members, one of whom acts as secretary. The president was appointed for life, the assessors annually, but capable of being re-elected; and the president was Prince Frederick, the second son of the king. The members form four sub-committees; finance, instruction, correspondence, and general purposes: the first and second having each an assessor for chairman, and the others choosing their own.

The second committee, or Committee of Superintendance, consists of twenty-four members, who elect their own president and secretary. This committee examines and audits the accounts, and watches the expenditure and operations of the society.

Having received the sanction of the king, the society was recommended to all the local authorities, and soon found itself in possession of 5380*l.* obtained from more than 20,000 members. With these funds, having been enabled to make the necessary arrangements, the society purchased the estate Westerbech Sloot, on the east side of the Zuyder Zee, and not far from the town of Steenwyk. This estate cost them

4,660*l.*, and it contained from 1200 to 1300 acres, about 200 of which was under a sort of culture, or covered with bad wood, and the rest a mere heath. They let the cultivated land, about one tenth of the whole; deepened the Aa, (which runs through the estate,) so that it is navigable for boats, and built store-houses, a school, and dwellings for about fifty-two families of from six to eight persons each. Their operations were begun in September, 1818; by the 10th of November the houses were ready; and the communes sent some poor families.

The total expense of each family, in English money, was as follows:

Building each house - - - - -	*l.*41	13	4
Furniture and implements - - - -	8	6	8
Clothing - - - - - - - - - -	12	10	0
Two cows, or one cow and ten sheep,	12	10	0
Cultivation and seed, first year - - -	33	6	8
Advance in provisions - - - - -	4	3	4
Advances of other kinds - - - - -	4	3	4
Flax and wool to be spun - - - -	16	13	4
Seven acres uncultivated land, net -	8	6	8
Total establishment	*l.*141	13	4

This estimate is between 22*l.* and 23*l.* for each individual, and they are expected to repay it to the society in rent and labor, besides maintaining themselves, in about sixteen years. Each allotment of seven acres is laid out in a rectangle, having the house toward the road with one end, and the other reaching fifty feet into the allotment. The dwelling occupies the part next the road, then comes the barn, after that the stalls for the cattle, and behind these the reservoir for manure, in which every particle of vegetable and animal refuse is carefully made up into compost, with the heath and moss of the land; the preparation of this compost being one of the most essential of their labors. The colonists are subjected to a kind of military regulation, all their work being done by the piece; they assemble at six in the morning in summer and winter, and those who do not answer to their names at the roll-call, get no wages for the day. When the labor of the day is over, each receives a ticket, stating the amount of wages; and for that he procures food from the store at fixed rates. Those who are at first unable to support themselves, obtain credit for a short period. The women spin, weave, and knit, at first from purchased wool and flax, but as soon as possible from the produce of their own flocks and fields. A day and a half's work every week is allowed for the support of the sick, the infirm, and those who are not fit for labor; and for this, those who work are allowed one shilling per day in summer, and eight pence in the winter. The whole of the necessaries and appointments are regularly inspected with military care, and such as have been wasteful are obliged to make good what they have destroyed. It will be borne in mind, that the whole stock out of which each family of seven or eight persons is to find support, and, if they can, effect some savings, is the stock of *l.*141 13 4, and the seven acres of waste land, which is of a description not the most susceptible of cultivation. The careful preparation of manure, the most remarkable feature in Chinese husbandry, is the grand resource; and the result is most encouraging, as an example of how much regularity and perseverance may effect with small means. As the preparation of manure is still very imperfectly understood in this country, and as many families throw away what constitutes with these colonies the elements of prosperity, we give some details from Mr. Jacob's book, the utility of which must compensate for their homeliness.

When the house and barn are built, the soil formed, by mixing sand and clay to a consistence which makes it sufficiently retentive of moisture, the land manured, dug, and one crop sowed or planted in it, then a family, consisting of from six to eight persons, is fixed on it at an expense, as before stated, of *l.*141 13 4. To enable this household to subsist, to pay the rent and to save something, it is necessary that very intense manuring must be persevered in. The directors therefore require, and by their enforcement of the prescribed regulations, indeed, compel each family to provide sufficient manure to dress the *whole* of the land every year. For this purpose each household must provide itself with three hundred fodder of manure, yearly; or, in English terms, one hundred and fifty tons, or at the rate of more than twenty tons to each acre. When it is considered that few of our best English farmers can apply one half that quantity of manure, it will not appear wonderful that seven acres should be made to provide for the sustenance of the same number of persons, and leave a surplus to pay rent and to form a reserve of savings. On each farm the live stock of two cows, or one cow and ten sheep, to which may be added pigs, would not nearly enable the cultivator to manure his small portion of land once even in four or five years.

It hence becomes necessary to form masses of compost, the collecting the materials for which forms the greater part of the employment of the colonists. These masses are created almost wholly by manual labor, of that kind which, but for such an application of it, would be wholly lost to the community. As straw is at best, in the early period, not abundant, and as that from the corn must at first be chiefly used as food for the cattle or for covering to the houses, other materials, which the heaths furnish, are resorted to in order to make beds for the cattle. The heath land is pared, but the operation is to cut with the spade a very thin slice of the earth, and not to the bottom of the roots of the plants, that they may, as they soon will do, shoot again; the parings are not only made thin, but in narrow strips or small spots. Thus but little soil is taken away, and the roots, though cut, are not all of them destroyed; the parts that are left bare are protected from being too much dried by the sun and wind; and the seed of the ripe heather is scattered over the spaces left bare near them, and soon bring forth the same plants. By this operation there is a constant succession provided of healthy material.

This paring of the heath is a joint operation, performed by the men in a kind of military line. The society pays each for the work he performs, and when the average cost is ascertained, the sods are sold to the several households at the same price, and are carried to their respective farms in small one-horse carts, which are kept by the society for that and for similar purposes, to which mere manual labor cannot be so beneficially applied. When these sods are dried and conveyed to the barns of the colonists, they are piled in a kind of sack, and portions of it are pulled out, not cut out, to insure their being broken into small fragments. With these the bedding of the cows or sheep, as the case may be, is formed.

The use of bog turf or peat, as one of the materials of compost, is not approved. It impedes the process of fermentation, which is the most important part of the preparation of the heaps of manure. Another expedient is therefore adopted, by paring the second year's grass land, whether of clover, ray-grass, or fiorin. These clods, containing a proportion of the roots of the plants which have been before harvested from them, and much garden mould, become useful auxiliaries to the healthy turf, and spare the use of that material which, if solely applied, would require almost as much land to supply it as the farm itself.

The bedding of the cattle with fresh material is performed every morning and evening, and remains under them seven days and nights, when it is wheeled to the dunghill. Each morning, that which lies near the hinder part of the cow is thrown forward, and the part towards its head takes its place, and fresh heather, about a quarter of a fodder, or two hundred and fifty pounds, added to the bedding; the same is also done every evening. The sheep and pigs are only supplied with fresh heather once a day. It is reckoned that ten sheep make an equal quantity of dung with one cow. It must be obvious to every one that the changing and consequent turning over thirteen times must make the mixture of the animal and vegetable substances more equally rich, and the uniform treading of it must break it into small particles, and give greater scope to the fermentative putrifaction.

Each week the stalls are cleaned, and the dung conveyed to the place appointed at the back of the barn. This is of a round shape, from three to four feet in depth. The bottom and sides are walled with either clinkers or turf, and made water-tight. It is commonly from twelve to fourteen feet in diameter, and sufficiently capacious to contain the dung made by the cattle in the course of four weeks. The mass is thus composed of portions which have remained from four weeks to one day, over which the ashes from the household and all the sweepings from the premises are strewed. Adjoining to the dung heap is the reservoir, into which the drainings of the stalls are conveyed. Equal care is taken that every other material for compost is preserved. In England little attention is paid to these matters; and even in agricultural districts many of the most valuable ingredients for fertilizing the earth (soap suds, for instance,) are constantly thrown away. The cesspool, containing about a hogshead, is never allowed to run over: and if it has not rained, is every other day filled up with water, and then with a scoop is taken up and sprinkled over the heap of dung. As this heap contains four weeks' dung, or thirty fodder, or fifteen tons, the administering fourteen such portions of rich fermenting matter must vastly enhance the value of the whole for the purposes of vegetation.

At the end of the fourth week, the dung-hole (called locally the gierback) is emptied, and its contents thus again turned over, the most putrid parts being by this means brought to the top; it is formed into a heap from three to five feet high, and carefully covered with sods; by this covering the fermentative heat is prevented from evaporating, and the rain water is kept from the mass, into which, if it penetrated, it would check fermentation. When the heap has lain and fermented during one, two or three months, it is carried to the field which is to be manured with it. The covering of sods is separated from the heap, and carried to the dung hole, where it is laid at the bottom of the next monthly accumulation, and imbibes with it an equal proportion of vegetative force.

These details will not be considered of little importance in a country like ours, where there is still much waste land to be cultivated, and many idle and wretched members of society to be supported. The mode of rendering poor land fruitful is by the application of manure. This is the moving power to be applied to cultivation; it is to agriculture what water, wind, or steam is to mechanics.

The following are the sums of produce and expenditure for each family for one year:

Total produce - - - - - - - -	*l.*47	15	0
Expenses, including rent, (about 12s. an acre) - - - - - - - - -	39	11	8
Surplus each year	*l.*8	3	4

The desire of gain, and the approbation of the superintendants, are, in general, found to be sufficient encouragements both to industry and good conduct. When these are not enough, forfeiture of privileges, confinement, and hard labor, are resorted to. There are also badges of honor—medals of copper, silver, and gold. Those who have the copper medal may leave the colony on Sundays without asking leave; the silver is given to those who have made some savings, and they are allowed to go beyond the colony in the intervals of labor on working days; and when they are entitled to the gold medal, by having shown that they clear *l.*20 16 8 a year by their labor, they are free tenants, and released from all the regulations of the colony. These privileges may however be suspended for offences.

In the course of seven years from its first

establishment, the colony of Frederick's Oord contained a population of 6778, including that of Omme Schanze, which is under a more rigid control. Among the number were 2174 orphans and foundlings. The total number forming all the colonies in Holland were stated to Mr. Jacob at 20,000, but he thinks it exaggerated: there were, however, 8,000 in North Holland. Every attention is paid to the education of the young.

BRAN OR HULL OF WHEAT, &c.—In a French paper, we find the following extract from the proceedings of the Academy of Sciences:

Economical researches relative to the bran or hull of wheat and other bread stuffs, by Dr. Herpin. The author gives the result of his researches in the following propositions:

1st. That the envelope or cortical part of the wheat forms at least one-twentieth of the weight of the grain.

2dly. That nevertheless, by the customary mode of grinding, wheat produces one fourth of its weight in bran.

3dly. That about seventy-five per centum of the nutritive substance of the grain is left in the bran.

4thly. That by simple washing there may be drawn from the bran one half its weight of the first quality of flour or oatmeal, according to the nature of the grain.

5thly. That there may, by this mode of proceeding, be made from grain, at least fifteen per centum more bread than is at present obtained; that is, from the same quantity of grain now used in France, there might be had three millions of killograms of bread per day more than is now obtained.

CLOVER MANURE FOR WHEAT.—We would request practical farmers to compare the following, taken from the Hagerstown Torch Light, with the successful method of shallow ploughing green manure, recorded in the Transactions of the Essex Agricultural Society in another part of this number:

THE wheat crop is the most important of all crops to the farmer. A man who has one hundred acres of cleared land, of common quality, ought to raise on an average *one thousand bushels of merchantable wheat*, and also rye, corn, oats, and potatoes, sufficient to defray the expenses of carrying on the farming. The wheat crop should always be *clear gain*.

Don't startle at this, farmer. A man who has a farm of one hundred acres of cleared land, can yearly put forty acres of it in wheat; and if the land be in order as it should be, and as every farmer may have it, every acre of the forty will give 25 bushels, amounting altogether to one thousand bushels. I shall now show how land must be farmed, in order to produce in this way. Never break your land before harvest and stir it after, as is customary with many farmers. Much ploughing impoverishes land, and is productive of no good effects. Your wheat ground must be heavily set in clover, and broken up after harvest with three horses, when the seed in the clover is ripe. By thus turning clover down after harvest, when the seed is ripe, it will never miss coming up in the spring, which is frequently the case when sown in the spring with seed. You also save between forty and fifty dollars worth of seed annually, which it would take to sow your ground. When the clover is ploughed down after harvest, before you seed the field, you must harrow it lightly the way you have ploughed it, in order to level the ground, and prevent the seed from rolling between the furrows and coming up in rows. Never plough your seed in with shovels, nor harrow it in across the ploughing, when you have turned down clover after harvest, lest you raise the clover, but always harrow it in by twice harrowing with light harrows the way you have broken up your ground. Many farmers have ploughed down clover once, and finding that their crop was not bettered by it, but injured, as they believed, have never attempted it again. This is almost invariably the case the first time clover is ploughed down after harvest, especially if the fall be dry, and the winter frigid and close. In turning clover down you must necessarily plough the ground deep, and the first time you do it you turn up the clay, which, being unmixed with manure of any sort on the top, is in a bad state to sow wheat on. The wheat after some time will sprout and come up, but will look yellow and very spindling. Its roots after some time will get down among the unrotted clover, and there will choke, and for want of moisture a great deal of the wheat will dwindle away and die. The unrotted clover, too, below, will keep the ground loose and springgy, so that the frost will injure the wheat not a little. But when the clover is twice ploughed down the bad effects to the wheat crop arising from unrotted clover are not experienced. You then turn up the clover from below which was ploughed down before, and which is a manure on the top. The seed sown on it now springs up directly, and before the winter sets in has taken deep root. The clover now turned down rots very soon, in consequence of the rotten clover turned up, which as manure always keeps the ground moist, however dry the fall. You may now go on farming in this way: every time you turn up a coat of clover, turn down one, and your wheat crop will never fail, until your land becomes so rich that you will have to reduce it with corn.

CHEAP AND CONVENIENT BATH.—The Medical Journal gives the following excellent advice to those who wish to have a healthy body and a cheerful mind:

"There is one mode of refreshing and hardening the body that is extremely cheap, extremely convenient, and yet seldom adopted.—The warm and cold water bath is indispensible to health. No system can go on with its full natural vigor so long as the pores of the skin are encumbered and obstructed by the particles of perspirable matter, that, not being carried off by evaporations, accumulate on the surface. In some form or other, general ablution is required, and that often, by all animals, and by none more than by man. Independently of the benefits of cleanliness derived from such baths, there are other advantages resulting from them, which it is not our purpose here to discuss: and which, to medical men certainly, are already familiar. But the cold and the warm bath are attended with some inconvenience, and with some expenditure of time, and, in this city, of money also. It is not an indifferent matter, therefore, that all should be reminded of the power of the air bath, in promoting both health and comfort, and rendering the water bath less frequently necessary. It costs nothing to expose one's self a few minutes on rising in the morning, to the air of a dressing room; and after a short time, it will always be regarded as a luxury. In summer, the windows of the apartment may be open, and the external air admitted freely around the person. If to this delicious and invigorating bath, friction be added, we can scarcely name a more sure method of preventing disease and imparting tone and vigor to the whole system."

COLOMBIA: *Climate, Productions, &c.*—The following extracts from a letter from a highly respectable and intelligent gentleman, long a resident in Colombia, will be read with interest. The means of knowing and observing the condition of the country were open to the writer in an unusual degree, and the accuracy of his statements may be relied upon.

The population here is mixed; there are all colors, and all shades of colors, to be found; there is the pure white Castilian, the pure Indian, the pure African, and every hue that could result from an amalgomation of the three. The people are naturally very talented and very amiable, and of fine manners, the ladies particularly; and they are besides *very* beautiful, which I can say without offending any of my own charming countrywomen—for when I choose to compliment a lady here, I tell her that I consider her worthy of being a North American. I could say nothing, as I conceive, more flattering. They are besides almost all patriots, of much decision and energy of character; and the successful issue of the revolution, and of the subsequent redemption of the country from the usurpation of Urdaneta, may be in no small degree imputed to the women of Colombia. *They never despaired of the Republic;* they suffered every thing that the remorseless cruelty of the Spaniards could inflict. But they suffered with the firmness of the Spartan matrons, and have even gone to the scaffold unshrinking and undismayed, repeating to the last that magic and hallowed word, *libertad, libertad*, (liberty, liberty.) Such are the women of Colombia. Good wives, good mothers, and good republicans,—if they have vices, they are redeemed by many virtues; and let it be recollected, as a potent apology for them, that they are heirs to the bad effects of the three hundred years' continuance of bad institutions, and that they have been parties and victims to a fierce and sanguinary conflict of 22 or 23 years, and that they are the children of a *tropical climate*.

In this country there is nothing more striking than the astonishing variety of soil and climate and productions. The soil is very excellent in many parts, and adapted to the cultivation of every thing that grows. Three crops of corn may be gathered in the course of the year from the same ground in many places. The people cultivate sugar-cane, cotton, coffee, cocoa, indigo, tobacco, a variety of grains, wheat, barley, rice, &c. &c., garden vegetables, and an almost infinite variety of delicious fruits. The state of agriculture is in a most lamentable and languishing condition, as you may infer from one fact amongst many. In the neighborhood of this place there is an abundance of wheat land; yet it is no uncommon thing to see very indifferent flour selling at the rate of 35 to 40 dollars the barrel, and I will add, that I have seen Irish potatoes selling at $3 the bushel; that was, however, when the city was besieged, and the supplies partially cut off, but still they are always extravagantly dear, although they are grown in almost all parts of this country, and are much superior to those of the United States.

As there are no seasons here excepting the wet and dry, the wet called the winter and the dry the summer, the productions of the soil are regulated by the climates. In what they call the cold climate, perhaps, from 8 to 12 or 13,000 feet above the level of the sea, they grow wheat and other small grain, potatoes, aracachas, &c. &c. Corn does not do well. In the plain of Bogota, the elevation of which is about 9000 feet, it requires nine or ten months for it to ripen. There the mercury in Fahrenheit's thermometer ranges, in the shade, from 50 to 65; generally it is from 56 to 62, or thereabouts. In the sun it is sometimes very warm; but flannel is worn throughout the year by all foreigners, and by many of the natives.

In what is called the temperate climates, with an elevation of 4 or 5000 feet above the sea, they grow cotton, sugar-cane, corn, potatoes, and various fruits. In those climates it is from 12 to 15 degrees warmer than the cold.

The next is the warm climate, but little elevated above the sea, where it is always excessively warm. The productions belonging to those climates are cocoa, coffee, cotton, sugar-cane, indigo, corn, with a few garden vegetables, and many kinds of fruit.

The facility of changing climate here surprises a North American at first. In the U. States there can be no very decisive change without going to Mexico: a voyage or journey of some two or three thousand miles. Here you may leave in the morning a point, say 12 or 13,000 feet above the sea, where it will be equal to our worst March weather; at 12 you may be in a climate where the temperature is about equal to our May weather; and you may sleep at night in a climate equal to that of New-Orleans in its utmost fervor. This diversity of climate is a great convenience to the sick and to the valetudinarian. There are many delightful baths too, mineral and chalybeate, warm and tepid, which are very beneficial.

There are so many kinds of fruit, that it would require a sheet to enumerate them. The principal are oranges, pine-apples, cambres grenadelias, which are very fine. There is also a fruit called the chrimaya, which is designated here the queen of fruits, and which Humboldt says is worth a trip to this country to eat. All these, and many more, are very cheap. Apples and peaches they have too, but they are scarcely considered eatable by a North American. The art of engrafting and inoculating is but little understood and less practised, and without these there can be no good apples. The quantity of fruit and the cheapness of sugar lead to the custom, I presume, of making enormous quantities of sweetmeats, which constitute a part of every meal, and in my judgment do much mischief.

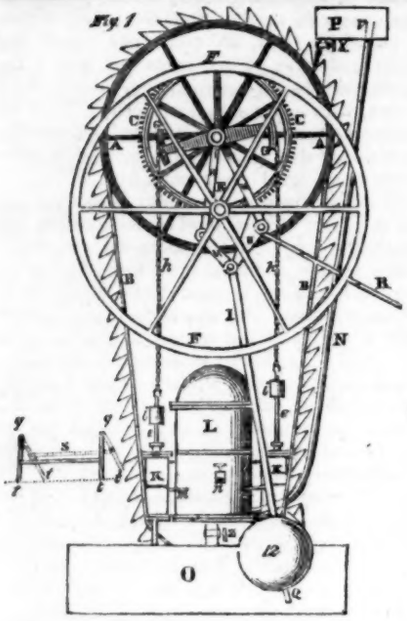
Manual labor is but little relieved here by mechanism. There are but few labor-saving machines of any kind in the country, not even a cotton gin (or not more than one) or spinning jenny. The people are not fond of innovations, and are particularly hostile to those that might happen to interfere with their usual and hereditary occupations.

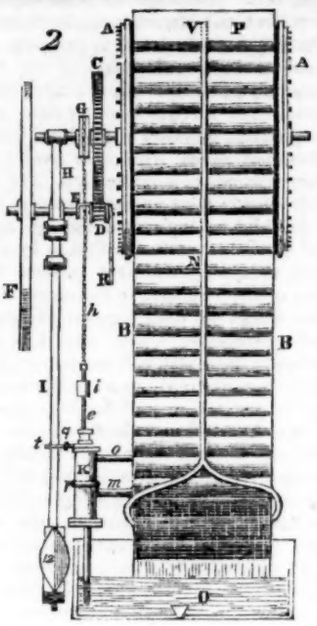
What I have written will serve to give you a slight knowledge of this country, of which it has been justly said, "God has done much for it, and man very little."

State of Agriculture in the State of Tennessee.—The Nashville Republican, in a few remarks, which the editor modestly calls "crude and undigested," gives rather an unfavorable picture of the condition of agriculture in the old and long settled State of Tennessee. Our readers cannot fail of perceiving that the circulation of periodicals devoted to rural affairs, and the exertions of agricultural associations, would have greatly increased the value of property, the comfort and the happiness of the people, and the relative importance of the state. What individual, then, who loves his country, can refrain from giving effectual aid to the means of promoting the welfare of the country? The editor first speaks of this paper: "*The New-York Farmer and Gardener's Magazine* is the title of an agricultural journal published in New-York, by D. K. Minor, to which we would earnestly invite the attention of our country readers. It is published monthly, each number containing 32 large quarto pages of three columns each, and devoted particularly to Agriculture and Horticulture, &c. Although its *main* object will be to collect and disseminate such information as may be calculated to promote a *skilful* and *scientific* cultivation of the soil, it will contain much interesting matter on other subjects, such for instance as *road making and repairing*, together with steam carriages for common roads, with other modes of improving *internal* communication. The March number of this most valuable journal lies before us, and having examined its rich and varied contents, we feel called on by a sense of duty to the agricultural interest of this section of the country, to commend this and similar works to their serious attention and liberal patronage. The time has arrived when stern necessity will *compel* our farmers and planters promptly to avail themselves of every improvement and facility, which can tend to enhance the productive value of their labor and of their cultivated lands. The wretched, unskilful, slovenly and destructive system of tillage, which so generally prevails, must be abandoned, or the country cannot longer continue in a prosperous condition. Aided, heretofore, by an unsurpassed, we might almost add, unequalled fertility of soil, its great local advantages, and the demand that existed for its staple products in foreign markets, this country has flourished *in spite* of the deteriorating effects of ignorant, unscientific husbandry. The importance of *thorough* tillage seems to be unknown and wholly unappreciated, while the practice of husbanding the resources of their lands, by a judicious alternation of crops, has never to any considerable extent prevailed. Year after year, since the first settlement of the country, it has been corn, corn, corn, and cotton, and tobacco, in regular and unvaried succession. Tobacco has become a drug. Cotton is not much better, and is getting to be a very uncertain crop. Corn is still made in great abundance, and fed away wastefully and unprofitably to stock. We have heard of a man who, too lazy to feed his horses, actually cut a log out of his crib, that they might *help themselves* at any time when hunger should prompt them to do so. Instances are numerous where the same field has been put in corn from twenty to forty years in succession. Ten or fifteen years ago, such a field yielded from fifty to sixty bushels of corn per acre, now not more than thirty-five or forty. The deterioration of our cultivated lands, too, is accompanied by a fall in the prices of produce, and these causes, combined with other considerations, render it impossible for a farmer in this part of the country to make more than three per cent. upon his capital. Is it not high time, then, that a change should take place in our farming operations? It will take place, it must take place, it is already taking place. Disheartened by the failure of two successive cotton crops, some of our planters are turning their attention to something else, and others are preparing to emigrate further to the South. A friend of ours, who owns as fine a tract of land as can be found in this section of the state, and who has been in the habit of cultivating it in corn and cotton, has this year taken his hands off of it, and sent them to the Iron Works to cut wood at 37½ cents per cord—he *finding them*. He tells us, and we have no doubt of the fact, that he can clear far more by the latter mode than by working his land. Thus, while even our most fertile lands will scarcely repay, under the present system, their possessors for the labor and expense of cultivating them, we are giving, in the *Nashville* market, from five to six dollars a barrel for flour, 25 cents per pound for butter, and five or six cents per pound for good beef! In conversation, a few days since, with a friend and subscriber from an adjoining county, on the "times," he casually mentioned that in his neighborhood, a short time since, good cows sold from five or six dollars per head. Upon our informing him of the price of good beef in our market, and inquiring why his neighbors did not fatten their beeves and send them here, he replied that it would *cost* a great deal to fatten them. This is a fact. But why is the cost of fattening a beef in such a country as this too great to justify the farmer in doing so, when, too, throughout the past winter *first rate* beef has never sold in our market for less than five cents per pound? Simply because the art of raising and fattening stock at the *smallest possible expense* is at an extremely low ebb in this country. Stuffing a beef with raw corn is the only mode of fattening it, that would suggest itself to many persons in this part of the world. *Root husbandry*, by which a given quantity of land may be made to produce a much greater quantity of nutritive matter for stock than if it were occupied by grain or grass crops, is unknown amongst us. We see no extensive crops of potatoes, turnips, mangel-wurtzel, &c. for feeding cattle. This is an improvement, of the value of which we appear to be profoundly ignorant. Even in laying down lands to grass, either for pasture or mowing, we are immeasurably behind our sister States. In the art of breeding the best animals and the best vegetables, by a judicious selection of individuals to propagate from, we are also sadly deficient, always excepting the blood horse, in which we are proud to say we yield to no State in the Union—no, not to the Old Dominion. In this particular branch of stock husbandry the State has acquitted itself nobly, and to it we are in a great measure indebted for the *little beginning* that has been made in the cultivation of grasses, and the few distant approximations to stock farms here and there visible over the country. It is a great point gained, and having succeeded so well with the horse, it is to be hoped that more attention will be paid to the breeding of cattle. So fine a stock of horses and so scrubby a breed of cattle, it would be difficult to find together in any other quarter of the globe."

Drink for Horses.—Scarcely a dish is cooked by the French that does not produce in some way or other a soup. If a piece of meat is boiled, or some simple vegetable, the liquid is properly seasoned and eaten as soup. In most families in the United States, the liquid water in which the delicious asparagus, for instance, is boiled, is thrown away; but, with a little preparation, scarcely a better dish of soup is put on the table. In the following paragraph, it is easy to see that much nourishment is saved by giving the boiled liquid to the horses.

"Some of the inn-keepers on the western road have adopted the practice recommended by a member of the Bath Agricultural Society, of boiling the corn given to horses, and giving them the water to drink. It is most satisfactorily ascertained that three bushels of oats, barley, &c., so prepared, will keep the horses in better condition than double the quantity in a crude state."





Pierre Nicholas Hainsselin's Machine or Motive Power for giving Motion to Machinery of different descriptions, to be called "Hainsselin's Motive Power." [From the Repertory of Arts, &c. for March.]

No. 1 represents a front view of the machine, and No. 2 a side view; similar letters of reference are used to denote similar parts in each view. A A is a large drum; B B, an endless series of reservoirs, or (as they would be called on a water-wheel) buckets, each fastened by a hinge joint to the other, so as to form an endless chain passing over the drum; C C is a cogged wheel, working into the pinion D, and E is an eccentric, more particularly explained hereafter; F F is a fly-wheel; G G is a balance beam, carrying the segment of a circle at each end; H H H H is what I call an escapement for I, which is a pendulum, and I 2 is the weight of the pendulum; K K are two pumps; L is the main cylinder of the machine; M, an air pump; N, a pipe through which the water which works the engine is raised; O is a reservoir to receive the water from the descending buckets, and P a reservoir to receive the water from the pipe N.

When it is required to make one of the said machines, the following details must be observed: Suppose, for instance, it is required to make one on my plan, equal in power to a steam engine of which the expansive force is equal to a resistance of 1,000 lbs. in a second. It will be seen that air and water are the two principal agents in my machine. Water, it is known, weighs from 60 to 62 lbs. the cubic foot, and it requires 32 cubic feet of air to balance one cubic foot of water; and I have found by various experiments, that my machine employs about three-fourths of its power to produce its own action. From these premises it results, that, in order to have a machine on my plan equal to 1,000 lbs. per second, there must be 4,000 lbs. of water in the descending buckets, and 200 cubic feet of air condensed in the cylinder L, by means of the air pump M, which is worked by hand by a lever handle.

The drawing represents 64 buckets, fastened together by hinge-joints, in such a manner as to form an endless chain of buckets, their motion being so contrived that they descend full at one side of the drum, and rise empty at the other side; the drum being about 3 feet 6 inches in diameter, 25 of these buckets can retain water at the same time, and in order that the united weight of their contents may be 4,000 lbs. it is necessary that each of the 64 buckets shall be of a size (whatever be their form) conveniently to hold 160 lbs. of water.

In order to supply the 25 descending buckets with the required quantity of water, the two pumps K K are placed a little above the lower reservoir O; the rods of these pumps plumb with the extremities of the balance beam G G, by which they are worked.

The capacity of each of these pumps should be such, that each stroke of the piston should raise a column of water to the upper reservoir P, sufficient for the supply of one bucket, that is to say, 100 lbs. These pumps, which may be called hydropneumatic, are nearly like ordinary lift-pumps, the only difference being that the pump chamber is divided into two parts by the division *p*, the upper part being furnished with the piston of a force pump; the same rod, *e*, works both the piston of the upper part of the pump chamber, and the valve of the lower part of the chamber. The pump rods *e e* are fixed to a chain *h h*, which is attached to the segments on the ends of the balance beam G G, and thereby made to work the pump rods, while the balance weights *i i*, below the extremities of these chains, keep them at a proper degree of tension, and keep the beam on a just balance. The strong cast iron cylinder L must be capable of resisting the force of the condensed air which it is intended to contain, say at least 240 lbs. The interior of this cylinder is furnished with a division, by which an upper and lower chamber is formed, the lower is intended to receive the water which the pumps K K feed it with, by means of the pipes *m m*, at every stroke of their pistons; and in this chamber the water frees itself from the air which may have been pumped in with it, and which is suffered from time to time to escape at the cock *n*, when a quantity has collected sufficient in any way to retard the action of the machine. It is from this lower chamber that the water is supplied to the upper reservoir P.

The upper chamber of the cylinder L is destined to receive the air which is to be forced into, and thus condensed in it, by means of the small air pump. It will be seen that two pipes *o o* communicated with the upper chamber of the cylinder L and the upper chamber of the two pumps K K: these pipes are to let in the condensed air upon the tops of the piston, to cause the downward movement of their alternate action; *q q* are two valves, each furnished with a lever *t t*, which levers are connected by a pointed cross-bar S, as shown in plan in the margin of the drawing No. 1. As the two arms or levers *t t* of this contrivance project beyond the vertical line of the pendulum I, they are acted upon alternately by the vibration of the pendulum, thus alternately opening and shutting the valves *q q*. The lower reservoir O may be of any convenient capacity, but the upper reservoir P should at least be able to contain as much water as 25 of the buckets can hold, and the ascending pipe N, through which the water is raised from the lower chamber of the cylinder L, to the upper reservoir P, should be of such a diameter as to contain exactly the quantity of water required to fill three of the buckets.

The cock X is to regulate the descent of the water from the reservoir P into the buckets, which should be just equal to what is pumped up by each pump at each stroke of the piston. An air cock is attached to the top of the upper chamber of the cylinder L, and is to let a portion of the condensed air escape when its too great density causes the engine to work at too rapid a rate.

Z is a cock for emptying the lower chamber of the cylinder L, when necessary for repairs or otherwise, and a similar cock or valve should be made to the lower reservoir O, in case, at any time, it should be required to empty it.

As it is necessary that each bucket as it empties itself should be replaced by a full one, the pinion D should be so regulated with reference to the toothed wheel *c* (which is fixed on the same axis as the drum A) that at every half revolution of the fly-wheel F, (which gears in with the pinion D, and is on the same axis with the eccentric E,) one of the buckets shall present itself in turn under the cock X to be filled.

The pendulum I is fixed on the same axis as the balance beam G G, and the object of the eccentric fixed on the axis of the fly-wheel is to act upon that part of the pendulum which I call the escapement, at *r*, thus propelling the pendulum to one side, while, as soon as the eccentric turns away from *r*, and it thus escapes from the action of the eccentric for a time, its own weight brings it back to be acted upon by the eccentric again, thus keeping up the vibration of the pendulum. The jointed bars at H H H H, which I have called the escapement, form a part of the rod I. This rod is furnished with the weight I 2, which may be raised or lowered on the rod I, by turning it to the right or reft on the thread of the screw Q, to regulate the motion of the pendulum, and this motion may be further regulated by the segment bar and adjusting screw K, which expands or contracts the jointed bars H H H H of the escapement at pleasure, and thus allows an increased or diminished action of the eccentric on the part *r* of the escapement.

R is a lever to throw the pinion D in and out of gear with the fly-wheel F, in order to stop the machine, or put it in action when required, and it may be well here to describe that this is effected by means of a small arm,

which, when in gear, protrudes through a hole in the flange; O O of the pinion is drawn away from this arm, the fly-wheel and all upon its axis stops, and the pinion turns harmlessly with the toothed wheel.

Having now described the various parts of my said invention, and their several uses, I will proceed to describe the mode of putting the machine in operation. First, put a sufficient quantity of water in the reservoir P to fill 25 of the buckets, and about the same quantity in the reservoir O; then open the cock, X, of the upper reservoir, and by means of the lever R, throw the fly-wheel out of gear with the pinion D. By continuing to press lightly on this lever, R, it will cause the flange, *o o*, to rub against the wheel *c*, which it must, by means of the friction thus caused, be allowed to turn slowly, so as to give time to the 25 buckets to fill themselves. The moment the whole of the 25 buckets are full, the pinion must be smartly thrown into gear with the fly-wheel F, and by means of the lever *a* of the air pump M, the upper chamber of the cylinder L must be charged with air. It will be known when it is full by the sudden resistance the air will make when that is the case. The two foregoing operations will only be necessary when the machine is put in motion for the first time, or when afterwards, for any purpose, it may have been emptied of its air and water.

The machine is now ready to act, and it will only be necessary to give the first impulse to the pendulum, which, being done, the weight of the water in the 25 full buckets will cause the drum to rotate, as also the toothed wheel *c*; this will act upon the pinion D, which it worked into, and will cause the eccentric E, and the fly-wheel F, which are fixed upon the same axis, to revolve, the fly-wheel being so arranged as to make just half a revolution during each vibration of the pendulum.

The eccentric E, which is fixed upon the axis as the fly-wheel, will always act upon the pendulum, and secure to it its vibrating motion while the length of the strike will be easily determined by opening or shutting the escapement H, which is performed by turning the screw either to the right or left, as the case may be.

By raising or lowering the weight, I, 2, so as to make the vibration of the pendulum correspond with the speed of the fly-wheel. This weight, I, 2, should be of such a weight that when vibrating by its own weight, only, it will have the power to give full three strokes to the pumps K K. This pendulum, which is fixed on the same axis as the balance beam G G, will give an alternate movement up and down to each arm and segment of the beam, and these segments being connected with the rods *e e*, of the pumps K K, by means of the chains *h h*, their motion will work the pumps, and raise the water from the lower reservoir O to the upper P, through the lower chamber, of the cylinder L, and the ascending pipe N, whence it will flow again through the cock X, to fill in succession the 64 buckets of the machine.

The pendulum I, in its passage from * to *, strikes alternately the arms of the lever *t t*, which opens and shuts the valves *q q*, in order alternately to let escape and confine the air in the upper chamber of the cylinder L. The portion of the air which the alternate motion of the valves *q q* allows to pass into the upper chamber of the pumps K K expands, and acting with all its force on the upper side of the piston *d*, forces it down to the small openings *p p*, cut in the chamber for that purpose, and, escaping there, relieves the piston of the pressure, while the balance weights, *i i*, keep the chain, *h h*, stretched out, and the balance beam G G in equilibrio. —In order to preserve the density of the air in the upper chamber of the cylinder L, the operator must occasionally pump the chamber full of air, by means of the pump M; if this be done every five or six minutes, it will prevent the necessity of spending two hours when the machine first starts to charge the chamber.

Now, whereas it is evident that the power of the machine hereinbefore described may be applied to any of the ordinary purposes for which the power of steam-engines are now used, I claim it as my invention, &c., &c.

Smoky Chimnies.—He that can keep his body warm, and his temper cool, in a smoky room, in a cold, stormy, winter's day, has less of poor human nature in his composition than most men. Of all the evils "that flesh is heir to," deliver us from a smoky house, and its concomitants, a scolding wife, and ill-natured, peevish, squalling children. Some chimnies draw well except when the wind comes from a particular quarter; but the moment it veers round, and gets into that quarter, down it comes, puff after puff, and the whole house is immediately filled with smoke; from this there is no possibility of escaping unless one flees to the street and encounters the pelting storm, or, which is still worse, resorts to the neighboring tavern, and there, like Tam O'Shanter, plants himself "fast by the ingle, bleezing finely."

These kind of chimnies can be remedied by the following apparatus. Over the top of the chimney fix an upright iron pipe, like that of a stove-pipe, only larger, so that it will turn easily; to the top of this, and at right angles with it, attach another, open at both ends, and having a communication between the two; inside of this last must be inserted a trumpet-shaped tube, the large end of which must just fit, and be fastened to the pipe, in which it is inserted, and the small end extended over and beyond the mouth of the first, or perpendicular pipe, but not quite to the end of the one in which it is inserted. It must be remarked, that the top or horizontal pipe should be so attached to the perpendicular one as to have what we may call the escape end extend from it considerably farther than the mouth end. To complete the apparatus, attach a piece of sheet-iron to the escape end of the horizontal pipe, large enough to cause the whole to traverse like a vane, by which means the mouth will always be presented to the wind, and a current passing through the trumpet-shaped tube, over and beyond the flue of the chimney, which will produce a draught, and carry off the smoke. With this apparatus, provided it traverses well, it is impossible that a current of air can ever get into and pass down the chimney, while a current proportioned to the strength of the wind will always be passing over the top of the chimney, and forcing the smoke off as it rises.

To render Leather, Linen, &c. waterproof.—Take 100 lbs. of the best linseed oil; add one and a half pounds of acetate of lead, one and a quarter pounds of calcined amber, one and a half pounds of white lead, and one and a half pounds of very finely powdered pumice-stone. These solid substances, well ground and mixed together, must be boiled in the oil for ten hours, over a moderate fire, to prevent the oil from burning. This varnish should be of such a consistence, that, when mixed with a third part of its weight of pipe clay, it will be as thick as treacle. It is left to settle eight days, and is then passed through a lawn sieve. The next process is to grind, in a solution of strong and clear glue, as much pipe clay as amounts in weight to the tenth part of the oil employed, and to mix it to the consistence of ointment; adding the varnish by degrees, and stirring it well with a wooden spatula or stick. This varnish must be repeatedly stirred, till it becomes perfectly fluid; and then the desired tint is given by adding a fourth part of the color, ground in oil.

The linen must be stretched upon a wooden frame; and the composition applied upon it with a large spatula, three inches broad and nine inches long. The frame is then inverted, and the operation repeated upon the other side of the cloth: it is then left to dry for a week, and separated from the frame for use.

This cloth may be used for covers for carriages, &c.

For leather and skins, the same composition is used; but to give to the surface a smooth and brilliant appearance, the following varnish is employed. Take five pounds of the oil varnish, and an equal weight of well clarified resin; boil them together until the resin is dissolved; then add two pounds of oil of turpentine, having the color to be given to the varnish ground with it, and passed through a lawn sieve. This varnish is to be applied with a brush. When the varnish is thoroughly dry, it must be rubbed even with a pumice stone and water, and then washed clean. Two or three coats of varnish being then applied, and each coat suffered to dry for two or three days, is sufficient to produce a brilliancy equal to that of the Japan lacker.—[Bulletin de l'Industrie.]

Water in the Desert.—Among those improvements of the age which afford pleasing topics of contemplation is the following, taken from the Boston Transcript: Two persons who understood the business of boring for water, were lately taken to Egypt, by Mr. Briggs, then consul at Cairo. They were employed, under patronage of the Pacha, to bore for water in the Desert. "At about thirty feet from the surface (says the Repertory of Patent Inventions) they found a stratum of sand stone; when they got through that, an abundant supply of water was procured. We believe the experiment has succeeded at every place where it has been made. The water is soft and pure." In the Desert of Suez a tank has been made, of 2,000 cubic feet contents, and several others are in building.

It is a question worthy of philosophical consideration, what may be the effect of this discovery on the civilization of Egypt and Arabia—the fertilization of the soil—the increase of population—and the advantages derived by that commerce to which the barren and arid deserts have presented so many obstacles.

A companion that is cheerful, and free from swearing and scurrilous discourse, is worth gold. I love such mirth as does not make friends ashamed to look upon one another next morning; nor men, that cannot well bear it, to repent the money they spend when they be warmed with drink. And take

this for a rule: you may pick out such times and such companions, that you may make yourselves merrier for a little than a great deal of money; for "'tis the company and not the charge that makes the feast."—[Izaak Walton.]

NUMBER OF PLANTS TO AN ACRE.—The following is a very useful table. It is, however, much more convenient for farmers to be familiar with the rule or principle of calculation than to be at the inconvenience of referring to the table. The 160 square rods to an acre give 4840 yards, because the 5½ yards in length, to a rod, multiplied by itself, makes 30¼, the number of square yards in a rod; this last number, multiplied by 160, gives 4840. There are three feet in a yard; this number squared produces 9, with which you multiply 4840, and obtain 43,560, the number of square feet in an acre. All that the farmer need remember is the number of feet in an acre, which he will divide by the square of the distance of his plants. For example, if he plants 4 feet apart, 4 multiplied by 4, gives 16, the number of sq. feet allotted to each plant or hill. Divide 43,560 by 16, the quotient is 2,722, the number of plants or hills to the acre.

The number of plants which may be planted on an acre=160 rods or poles=4840 yards =43,560 feet, is as follows:

Feet apart.	Square feet.	No. of plants.	Feet apart.	Square feet.	No. of plants.
1	1	43,560	11	121	360
1½	2¼	19,360	12	144	303
2	4	10,890	13	169	257
2½	6¼	6,969	14	196	222
3	9	4,840	15	225	193
3½	12¼	3,556	16	256	170
4	16	2,722	17	289	150
4½	20¼	2,151	18	324	134
5	25	1,742	19	361	120
6	36	1,210	20	400	108
7	49	889	25	635	69
8	64	680	30	900	48
9	81	537	35	1225	35
10	100	435	40	1600	27

AFRICAN BEANS—GAME BIRDS.—Extract of a letter from Com. Porter, to J. S. Skinner, Esq. dated

PERA, Constantinople, March 5, 1833.

I shall send you a few beans from Africa. They were given to me by His Excellency the Baron d'Ottenfels, the Austrian minister at this place. The following is what he says of them: "Haricots du Kordosan en Afrique," from the seed of 1832. To be sown in April or May, either in dry or wet ground, indifferently sheltered from the north wind. The thick stem furnishes an excellent charcoal for gunpowder. The beans are good for fowls and beasts, (besteaux.) The plant cut up and mixed with manure gives to it great activity in enriching the earth.

We have a game bird here much resembling the swan in shape, and as large as a turkey. I will try and send you a drawing; in plumage they are like those fronting page 589 of the third volume of the Turf Register you sent me. I send you now one of the side feathers near the thigh, which may convey some idea of the size and beauty of the bird. It has but three toes, all standing forward; no hind claw or spur.

They are called *Tavoughau* by the Turks, which is the name for a turkey.

Yours, truly, DAVID PORTER.

Injury of Turpentine to Paint. By ROBT. R. HARDEN. [From the Southern Planter.]

We use paint on our wooden buildings with two objects: first, ornament; second, durability. Was oil used by itself, without any coloring matter, the wood would be made more durable than it is with paint; but as ornament is a considerable part of the objects of painting, and as the addition of paint to the oil, when properly prepared, does not very materially injure the preservative qualities of the oil, the ornamental effect of the coloring more than counterbalances the injury it does. Paint, when properly prepared, therefore, while it is highly ornamental to wooden buildings, so materially contributes towards their durability, that there is economy in using it. But as it is generally prepared, (I may say always,) the ornamental effect of it on the outside of buildings is made only temporary, and its preservative qualities wholly destroyed. It is only necessary to look at our quickly decaying wooden buildings, with the paint washed off more or less in different places, according as it is exposed to the sun and rain, to be satisfied that the expense of painting has added very little towards preserving the building; and whether a building looks better without paint, or with paint nearly all washed off, with here and there a little remaining to show that it once was painted, taste must determine. If what I have stated be a fact, that paint, as mostly prepared, is of little value, it will be well to look into the cause, of it that the evil may be remedied; and if I give the correct cause, happily the evil is removed without expense or trouble; or rather, it is cheaper to paint well than in this defective manner. We have only to leave out the spirits of turpentine, and we will have good paint. Ask the painter why he adds it to the paint, and he will tell you to make it dry quick. This is just the same as saying, to destroy the oil, which renders the paint useless. Now let us reason upon it, and see if this is correct. If we pour oil on wood it soaks into it, and after it is all soaked up, if we apply more oil, it will strike still deeper and soak up more; when it has penetrated sufficiently deep into the wood as to prevent moisture from rain, &c., penetrating as deep as itself, the wood is rendered very lasting. This would be the case if a building was simply covered with two coats of oil without paint. If we give it only one coat of oil, with a sufficient quantity of paint to give it color, the wood would so quickly soak up the oil that the paint would be left a dry powder on the building, that would be easily rubbed or washed off. If we give it first a coat of oil with a little paint added to it, the oil soaks into the pores; another coat of oil with the proper quantity of paint, while the pores are filled with the recently put on or first coat, remains sufficiently long before the oil is soaked up by the pores, for a part of it to dry with the paint, which forms a covering of paint. This is the advantage of giving two coats of paint; if the first coat was oil only, it would be better. When a house is thus painted, all the injury done by the paint is the oil which it retains and prevents from soaking into the wood; and this is in part, perhaps wholly, counterbalanced in forming a firm external covering, which tends to exclude moisture; thus painted, a building is preserved and ornamented. Now what will be the effect of adding spirits of turpentine to the oil? We know of nothing better calculated to destroy our intentions in the use both of the oil and paint than this addition of turpentine. Every housekeeper knows that if oil is on the floor, spirits of turpentine is the application to remove it. Every wash-woman knows that if oil is on her clothes, turpentine is the application to remove it; and how does it remove it when the oil and turpentine are added together? A chemical union takes place and the qualities of both are destroyed, and although either the oil or turpentine by themselves when applied on wood would add to its durabitity, yet when added together the original quality of both are destroyed, and the application is useless, just as an acid and alkali, when mixed together, destroy the qualities of each other and the effect of neither remains. Now when a building is painted with two coats of paint to which spirits of turpentine is added, instead of the first covering of oil (which has very little paint) being soaked up, and the second covering, as the pores are already fed, soaking up the oil so slow that a part of the oil may dry in the paint, thus making a firm coat of paint on the surface, which will exclude moisture and prevent the evaporation of the oil, thus making the wood almost as lasting as time, and the color to remain as long as the wood lasts, what will be the effect of this addition of turpentine? The oil is decomposed, and instead of soaking into the wood and slowly drying in the paint to give a firm covering, it is quickly evaporated by the sun, the paint is left a useless powder on the wood; where it is not sheltered from the rain, it is soon washed away; and in places where it only gets wet without being washed off, as the qualities of the oil are destroyed, it retains moisture and hastens decay. We have only to go to a house which was painted white, and examine the somewhat sheltered spots where they get wet by showers, yet the rain does not beat upon them so as to wash off the paint, and scratch off the paint, and we will find the surface in a state of decay, from the paint not excluding moisture but retaining it. When pine wood is painted, it should more especially have only oil and paint without the spirits of turpentine, as there is in the wood turpentine sufficient to injure the oil. If we examine the shingles or weather-boarding of a house, we will find wherever there is a knot or *fat place*, there the oil is decomposed by the turpentine in the wood, and the paint destroyed, even where no spirits of turpentine was added to the paint.

The oldest paintings we have appear as warm and glowing as when first executed, while the paintings of the first masters of modern times are injured, mostly as I think by the free use of turpentine. The fine paintings even of Sir Joshua Reynolds are loosing their beauty. By some it is supposed that the paints used now are not as good as they were in former days. 'Tis not the fault of the materials, but the preparation. Oil, for instance, and white lead, are as good now as they ever were, and were they used without turpentine or any thing else, as the painters say to make them dry, (or as we say, to decompose the oil and destroy it,) would last as long and be as good as they ever were. If we calculate the annual amount of money used in the purchase of turpentine, and to this add the amount of loss from the injury it does, we will find it an enormous expense.

Perhaps nine out of ten houses that take fire from sparks falling on the roof, do so from

this mossy growth, which never is produced on wood that is oiled; were shingles dipped in hot oil before putting them up, it would be a preventive from fire from sparks. A few days ago, during almost a calm, at mid day, when only a few coals were in the fire place, my house roof was discovered to be on fire. As there was no ladder nor no way of getting at the fire, it seemed as though the house would burn down. A very strong man, however, by getting in the window of a house not far off, was able to deaden the fire a little by throwing water with great strength; some drops would reach the fire: thus some little time was given for reflection. A man of great muscular strength with a small hatchet commenced cutting through the ceiling and sheeting. The fire began to blaze, the wind began to rise, all hope of extinguishing the fire was gone: he had however cut a hole through, and was able to tear off the boards and put out the fire. These shingles, upon examination, were found sound, but they were covered with this mossy growth. A very small spark must have set it on fire, for upon trial it was found almost as quick to take as gunpowder. Had these shingles been dipped in oil before they were put on the house, I would have been safe from such an accident, not only now, but for many years to come.

Starvation Farm, Feb. 12, 1833.

Thus I Think. [From Locke's Miscellaneous Papers, published in his Life by Lord King.]

It is a man's proper business to seek happiness and avoid misery. Happiness consists in what delights and contents the mind; misery in what disturbs, discomposes, or torments it.

I will therefore make it my business to seek satisfaction and delight, and avoid uneasiness and disquiet; to have as much of the one and as little of the other as may be.

But here I must have a care I mistake not; for if I prefer a *short* pleasure to a *lasting* one, it is plain I cross my own happiness.

Let me then see wherein consists the most lasting pleasure of this life, and that, as far as I can observe, is in these things:

1st. Health,—without which no sensual (as opposed to intellectual) pleasure can have any relish.

2d. Reputation,—for *that* I find every body is pleased with, and the want of it is a constant torment.

3d. Knowledge,—for the little knowledge I have, I find I would not sell at any rate, nor part with for any other pleasure.

4th. Doing good,—for I find the well-cooked meat I eat to-day does now no more delight me, nay, I am diseased after a full meal; the perfumes I smelt yesterday now no more affect me with any pleasure; but the *good turn* I did yesterday, a year, seven years since, continues *still* to please and delight me as often as I reflect on it.

5th. The expectation of eternal and incomprehensible happiness in another world is that also which carries a constant pleasure with it.

If, then, I will faithfully pursue that happiness I propose to myself, whatever pleasure offers itself to me, I must carefully look that it cross not any of those five great and constant pleasures above mentioned. For example, the fruit I see tempts me with the taste of it that I love; but if it endanger my health, I part with a constant and lasting for a very short and transient pleasure, and so foolishly make myself unhappy, and am not true to my own interest.

Innocent diversions delight me: if I make use of them to refresh myself after study and business, they preserve my health, restore the vigor of my mind, and increase my pleasure; but if I spend all or the greater part of my time in them, they hinder my improvement in knowledge and useful arts, they blast my credit, and give me up to the uneasy state of shame, ignorance, and contempt, in which I cannot but be very unhappy. Drinking, gaming, and vicious delights will do me this mischief, not only by wasting my time, but by a positive injury endanger my health, impair my parts, imprint ill habits, lessen my esteem, and leave a constant lasting torment on my conscience; therefore, all vicious and unlawful pleasures I will always avoid, because such a mastery of my passions will afford me a constant pleasure greater than any such enjoyments, and also deliver me from the certain evil of several kinds, that by indulging myself in a present temptation I shall certainly afterwards suffer.

All innocent diversions and delights, as far as they will contribute to my health, and consist with my improvement, condition, and my other more solid pleasures of knowledge and reputation, I will enjoy, but no farther; and this I will carefully watch and examine, that I may not be deceived by the flattery of a present pleasure to lose a greater.

On Comets.—It is a generally received notion among a great number of persons, that the near approach of a comet would break our planet in pieces, or at least produce a great accession of heat, sufficient perhaps to destroy animal and vegetable life, if not to burn the world altogether. The argument seems to have originated in a notion, that because heat produces expansion, therefore very highly expanded bodies must needs be very hot. It would be as good an argument to say, that because expansion by any other means except heat produces cold, that therefore all comets must be very cold; and neither argument would, in the least degree, afford matter even for a rational conjecture. We can form so little idea of what the state of a planet of vapor, it may be consisting only of one sort of matter, would be, that we might with as much reason speculate upon the possible organization of the possible animalculæ which swim in that vapor, as try in the present state of our knowledge to ascertain whether any and what degree of danger awaits us from such a source. A comet *may* certainly strike the earth in the next century; not one of these which are known, unless the laws of nature be singularly altered, but some one or other yet to come. It has been shown, but by considerations of so high a nature that the result cannot be expected to bring much conviction to any but a mathematician, that if a comet were launched at hazard into our system, for one orbit in which it could strike the earth there are 281 millions in which no such thing could take place as the laws of nature stand at present. The *advocates* of cometary interference (we have met with some whose manner of expressing their opinion on the subject almost entitles them to that name) usually suppose a special interposition of the Divine power, which resting on their own interpretations of certain scriptural prophecies,) they suppose will bring a comet on the earth. They are usually people of some religious feeling, and would act more consistently with the idea they ought to have of their own ignorance and the Divine power, if they ceased to prescribe to the Creator in what way it should please him to alter the course of events which it has hitherto been his will to arrange. It is impossible to produce any other argument on the subject, consistently with the design of this paper; the province of natural philosophy is to collect and compare facts, and to say what *will* be, if things continue as they *have* been; it never presumes even to conjecture what shall be, when the power which has hitherto disposed events in one manner shall judge it right to ordain a different arrangement.

As to the multitude of idle theories with which, for want of better information, this part of astronomy has been loaded, such as that the planetary system was formed by matter struck off from the sun by one comet; that another caused the deluge; that the four small planets were formerly one, which was broken in pieces by a third; that the moon was originally a comet, and the like: we would willingly amuse our readers by an account of them, if our limits permitted. They will however find them all handsomely exposed by M. Arago, in the *Annuaire* of the French Board of Longitude, for 1832. If any or all them should be hereafter proved to be true, it will be no excuse for those who first made them; for a result produced on insufficient evidence is bad, whether true or false. As the science of astronomy approaches towards perfection, we shall doubtless add some important and interesting facts to our knowledge of comets.

Foul Casks.—Foul pails, tubs, or casks, intended for butter or any other purpose, may be cleansed by putting in some bran, indian meal, or flour, and filling up with water; a fermentation will take place which will perfectly cleanse the vessel. The liquid is the better for hogs after undergoing fermentation; consequently there is no expense attending the process.

[*From the London Athenæum.*]

THE WIND IN THE WOODS.

'Tis a pleasant sight on a vernal day,
When shadow and sun divide the heaven,
To watch the south wind wake up for play:—
Not on the sea where ships are riven,—
Not on the mountain, 'mid rain and storm,
But when earth is sunny and green and warm,
O woodland wind, how I love to see
Thy beautiful strength in the forest tree!

Lord of the oak, that seems lord of the wild,
Thou art shaking his crown and thousand arms
With the ease of a spirit, the glee of a child,
And the pride of a woman who knows her charms;
And the poplar bends like a merchant's mast,
His leaves, though they fall not, are fluttering fast:
And the beach, and the lime, and the ash-crowned hill,
Stirs to its core at thy wandering will.

The pines that uprear themselves dark and tall,
Black knights of the forest so stately and old,
They must bow their heads when they hear thy call,
Aye, bow like the lily, those Norsemen bold;
And every tree of the field or bower,
Or single in strength, or many in power,
Quiver and thrill from the leaf to the stem,
For the unseen wind is master of them!

It is a gallant play, for the sun is bright,
And the rivulet sings a merrier song:
The grain in the meadow waves dark and light
As the trees fling shade, or the breeze is strong.
And over the hills, whether rocky or green,
Troops of the noon-day ghosts are seen;
The lovely shadows of lovelier clouds,
With the gloom of the mountains amongst their crowds.

The birds as they fly scarce use their wings,
They are borne upon those of the wind to-day;
And their plumes are ruffled, like all green things,
And flowers, and streams, by his noisy play:
One hour—and valley, and wood, and hill,
May be sleeping and shining all bright and still;
Not a wave, not a leaf, not a spray in motion,
Of all which now looks like a vernal ocean,—
Beautiful this;—yet I love to see
Thy strength, O wind, in the forest tree!

THE PRINTING PRESS IN TURKEY.—Mr. Mountstuart Elphinstone, in his very interesting Account of the Kingdom of Caubul, (a country near the higher waters of the Indus, between India and Persia,) and of the scattered Afghan tribes dependant thereon, gives the following anecdote of the Naikpeekhail, who, like the rest, profess the Mahometan religion, but are so barbarous that even reading is looked down on as an unmanly accomplishment among them.

"Some men of the Naikpeekhail found a Mollah, or doctor of the Mahometan faith, copying the Khoran, or their Bible, and not well understanding the case, they struck his head off, saying 'You tell us these books come from God, and here are you making them yourself.'"

The Turks are not quite so ignorant as this, but even they, not many years ago, when Sultan Selim introduced the art of printing, were led to believe that it was sinful to print the Khoran—that nothing but the pen and hand-writing could, without impiety, multiply the copies of their Scriptures.—Other works might go through the press, but unfortunately, at the time, the Turks read no book except the Khoran, and so the inestimable benefit of printing was to be thrown away upon them! This absurd prejudice originated in, or was kept alive by, the Turkish copyists, who gained a livelihood by transcribing the Khoran, each copy of which cost the people a hundred times as much as the copy the press could have afforded, and the printed copy, besides, would have been infinitely the more distinct and legible of the two.

The present Sultan, among his many reforms and improvements, has succeeded to set the press to work in earnest. Many elementary works have been printed, some three or four of a higher character, on History and general Geography, and now a newspaper (that novelty for the Turks!) comes regularly from the Sultan's printing offices, and is circulated through the vast empire. We are informed by a friend, who writes from Constantinople, that it is a very interesting sight to see the effects that have already sprung from these salutary measures. Instead of every coffee-house being crowded as it used to be, by idle, silent, stupified loungers, doing nothing but smoking their pipes, you find them now (in less numbers indeed, which is also a good thing,) occupied by men attentively reading the newspaper, or conning over "the last new work" neatly printed, and sold at a very cheap price. Before this, and almost up to last year, they were in the condition that all Europe was in four hundred years ago, or previously to the invention of printing, when only the comparatively rich could afford to buy a book or any thing to read. Even on the quays of the port, and in the bazaars of Constantinople, you now see Turks occupying their leisure moments with the productions of the press, which is thus becoming day by day more and more active.

THE CRAFTS OF GERMANY.—The different crafts in Germany are incorporations recognised by law, governed by usages of great antiquity, with a fund to defray the corporate expenses, and, in each considerable town, a house of entertainment is selected as the house of call, or harbor, as it is styled, of each particular craft. Thus you see in the German towns a number of taverns indicated by their signs, as the Masons' Harbor, the Blacksmiths' Harbor, &c. No one is allowed to set up as a master workman in any trade, unless he is admitted as a freeman or member of the craft; and such is the stationary condition of most parts of Germany, that no person is admitted as a master workman in any trade, except to supply the place of some one deceased, or retired from business. When such a vacancy occurs, all those desirous of being permitted to fill it present a piece of work, executed as well as they are able to do it, which is called their master-piece, being offered to obtain the place of a master workman. Nominally, the best workman gets the place; but you will easily conceive, that, in reality, some kind of favoritism must generally decide it. Thus is every man obliged to submit to all the chances of a popular election, whether he shall be allowed to work for his bread; and that, too, in a country where the people are not permitted to have any agency in choosing their rulers. But the restraints on journeymen, in that country, are still more oppressive. As soon as the years of apprenticeship have expired, the young mechanic is obliged, in the phrase of the country, to *wander* for three years. For this purpose he is furnished, by the master of the craft in which he has served his apprenticeship, with a duly-authenticated wandering book, with which he goes forth to seek employment. In whatever city he arrives, on presenting himself with his credential, at the house of call, or harbor, of the craft in which he has served his time, he is allowed, gratis, a day's food and a night's lodging. If he wishes to get employment in that place, he is assisted in procuring it. If he does not wish to, or fails in the attempt, he must pursue his wandering; and this lasts for three years before he can be anywhere admitted as a master. I have heard it argued, that this system had the advantage of circulating knowledge from place to place, and imparting to the young artisan the fruits of travel and intercourse with the world. But, however beneficial travelling may be, when undertaken by those who have the taste and capacity to profit by it, I cannot but think that, to compel every young man who has just served out his time to leave his home, in the manner I have described, must bring his habits and morals into peril, and be regarded rather as a hardship than as an advantage. There is no sanctuary of virtue like home.—[From Everett's Address.]

SOCIETY OF MECHANICS TO IMPROVE ARCHITECTURE.—An association of mechanics has been formed at New-Haven to improve the style and taste in architectural structures. The objects coming within the purview of the society are numerous, not only the style of dwellings, but of all the outbuildings, their adaptation for the comfort and convenience of man and beast, the economy and durability of the materials, and the best means of ventilating and warming the apartments, are among the subjects embraced. Such an association should exist in every considerable village, as well as larger town and city. Agricultural and Horticultural Associations should give at least some attention to this subject, and have a division of the members devoted to it.

"Pray, Mr. Abernethy, what is a cure for the gout?" was the question of an indolent and luxurious citizen. "Live upon sixpence a day—and earn it;" was the pithy answer. —[Annual Biography and Obituary for 1832.]

TEN RULES TO BE OBSERVED IN PRACTICAL LIFE.—The following rules were given by the late Mr. Jefferson, in a letter of advice to his namesake, Thomas Jefferson Smith, in 1825:—

1. Never put off till to-morrow what you can do to-day.
2. Never trouble others for what you can do yourself.
3. Never spend your money before you have it.
4. Never buy what you do not want because it is cheap.
5. Pride costs us more than hunger, thirst, and cold.
6. We never repent of having eaten too little.
7. Nothing is troublesome that we do willingly.
8. How much pains have those evils cost us which never happened.
9. Take things always by their smooth handle.
10. When angry, count ten before you speak—if very angry, a hundred.

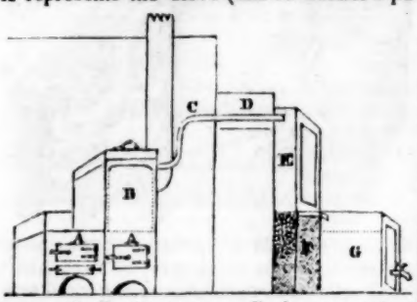
IMPROVEMENTS IN BAKING.—Some important improvements in the process of baking bread on a large scale have been recently put in operation in an English city. The same principles and similar apparatus, we believe, have already been applied to this purpose in our own country. We are induced to state that an individual of this place has invented an oven which, it is confidently believed, will far exceed the English invention, in reducing the labor of baking: one oven of this construction, we understand, will bake 24 barrels of flour every 24 hours—the entire time commonly occupied in heating and cleaning being saved, by keeping a constant fire *outside*. The same individual has now in operation a machine for forming the dough into biscuit, whereby a saving is secured of at least two-thirds of the labor required by the common method; and the flour intended for our shipping, we are told, may be baked into *thin* or *thick* bread, at a great reduction of expense. Cost of fitting a bakery according to the above plan, it is said, will not exceed $500. The inventor is desirous that the subject may be investigated by scientific and enterprising ship-owners and other citizens, trusting that his demonstrations will be such as to secure for his improvements an adequate degree of encouragement.—[Nantucket Inquirer.]

Apparatus for freshening Salt Water. By E. W. B. [From the London Mechanics' Magazine.]

DEAR SIR—I beg to submit for insertion in your truly valuable Magazine, the design of an apparatus intended to remedy the dreadful consequences arising from want of fresh water on board of ships. The apparatus by which this immense advantage may be obtained is so simple, and will occupy so little room, that there is no vessel which might not readily avail itself of it.

It is well known that the steam arising from salt water is perfectly fresh. If, therefore, this steam were conveyed, by means of a pipe attached to the copper, through a trough of cold water, which would act as a condenser, and if the water thus obtained were then

passed through a filterer, it would be furnished for use not only in a fresh but in a very pure state. In the accompanying sketch, A A represents the stove (one of Frazer's pa-



tent sort); B, the copper; C, the steam pipe; D, the cold water condensing trough; E, a well for the reception of the water to be purified, which is half filled with sand, and coarse gravel on the top of it, and communicates at the bottom with another well, F, only half the height of the former, and which is also to be filled, excepting two or three inches, with coarse sand. The water, after filtering downwards through the first well, ascends through and accumulates on the top of the sand in the second, whence it passes over into the reservoir, G.

If, from frequent use, the apparatus should get in the least clogged, it may be cleansed in a few minutes, with the utmost facility, by merely washing the sand and gravel, and thoroughly rinsing the pipes.

Much, of course, will depend on the size and purity of the sand, which will not always afford the same results. I have found that a prolongation of the stratum of sand does not much impede the produce of the filterer, but materially contributes to the purity of the water, which, it is not exaggeration to say, may be had by this means equal to the best spring water.

[In another number of the Mechanics' Magazine, we find the following, in relation to the preceding invention:]

Salt Water Freshening Apparatus.—Dear Sir: Since I forwarded the sketch of the apparatus for freshening salt water, which you was kind enough to insert in your last number, I have found that the pipe for the steam must be in the shape of a syphon, and not as shewn in your engraving; for I find that the motion of the ship, when there is the least wind, would otherwise send the water back into the boilers. There ought also to be a cock inserted in that part of the pipe which is close to the boiler, so that the steam might be turned off when required; for in Fraser's patent stoves most of the vegetables are cooked by steam. There might also be a pipe led from the condenser to the boiler, so that when the water becomes warm from the action of the steam in the pipe, it could be discharged into the boiler. I remain, dear sir, your obedient servant,

Edw. Whitley Baker, jun.

Sewing on Glazed Calico.—By passing a cake of white soap a few times over a piece of glazed calico, or any other stiffened material, the needle will penetrate with equal facility as it will through any kind of work. The patronesses of the School of Industry pronounce this to be a fact worth knowing, the destruction of needles in the ordinary way occasioning both loss of time and expense.—[Taunton Courier.]

Stone-Splitting Screws. By Robert Mallet. [From the London Mechanics' Magazine.]

Sir,—Some time since, while visiting the Bangor slate quarries, I was struck with the enormous waste of materials, arising from the mode adopted of shaking down large masses of slate to be afterwards split into roofing slates. The strata lie nearly vertical, and by every blast that is fired many tons of slate are shivered to atoms and made useless.

As a remedy for this, some powerful but simple application of the wedge appeared to me to be worthy of consideration. A conical male screw, working in a split female screw, placed in a jumper hole in the stone to be cleft, appeared one of the best that occurred; and, upon subsequent experiment, I find it to exceed my expectations, both for splitting, roofing, slate-work, and all other stones.

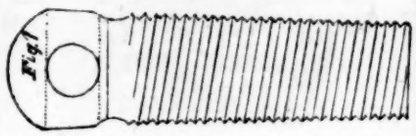
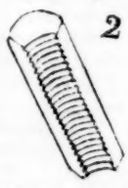


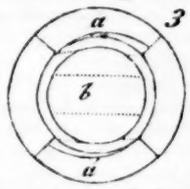
Fig. 1 represents a vertical screw for this purpose, made as an experimental one. It is about nine inches long in the screw, and two inches diameter at the lower end, and two inches and an eighth at the upper. It has a round thread, of as strong a form as possible, and a proper eye at top for the insertion of a lever. The two segments of a cylindrical shell, which form its nut or box, are each one-fourth the circumference of a complete cylinder, and half an inch in thickness; thus the jumper hole for this screw requires to be three inches diameter and nine inches deep.

The screw is made of iron, sheathed with steel like a tap, and hardened; and the box segments are made of cast iron, poured in an iron mould, which makes the screw threads very perfectly and cheaply; their brittleness and hardness are afterwards corrected by annealing. They alone are injured in the operation of splitting, and by this way of making them are easily replaced.

Now, I am fully aware of the objections that may be urged, of a conical screw being applied to a cylindrical one, and of the threads of a conical screw making variable angles with the axis; but the taper or angle of the cone requires to be but very small, being determined by the modulus of elasticity of the stone to be split, which in all rocks commonly met with is very low; so that the screw being very coarse—having round threads, being very little taper, and not requiring to fit accurately—those objections are not cogent.

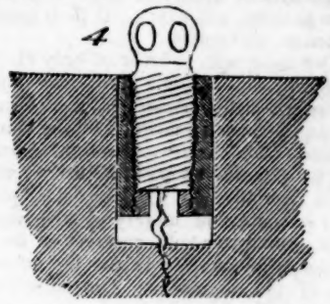
Fig. 2 represents one of the segments of



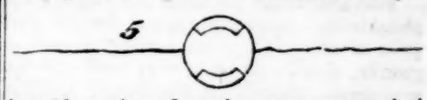


the box or nut; and fig. 3 is an end view of the two ($a\,a'$) in their places in the jumper hole; b, the screw.

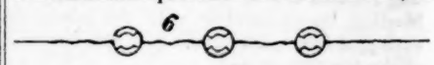
To use this apparatus, the jumper hole being prepared, the two segments are placed at opposite sides of it, and the screw inserted and screwed down. The friction of the stone against the back of the segments keeps them in their respective places. The screw must descend, and as it descends it must expand the segments, and by their expansion the



stone is split, (fig. 4.) I have found by experiment that the rock will always split in the direction of the interval between the segments, as in fig. 5; so that when a pro-



longed section of an homogeneous rock is required, it is easily produced by a number of such screws placed in the desired line, as



in fig. 6. Omitting the consideration of the effects of friction, which, I am fully aware, are in this case very considerable, but can only be determined by experiments, it is sufficiently obvious that the power of this instrument is the same as that of a wedge employed for cleaving, whose angle is equal to that of the cone round which the screw is wrapped, urged, or driven on by the energy due to the same screw, actuated by a lever of a given length.

The power of this screw, then, is expressed by

$$P = \frac{h}{2\pi R} W.$$

where P is the power or energy of the screw; h, the distance between two contiguous threads; π, the constant ratio of the diameter of a circle to its circumference; R, the length of the lever used; and W, the power or dead weight applied.

The power of the wedge, again, is given by the equation,

$$P = \frac{R\,l\,B}{L^2}$$

P representing the energy with which the power of the screw acts against the resistance of the particles of the stone, the length from the point or extremity of the cleft or split when *first commenced*, to that point where the resistance may be supposed concentrated against the sides of the wedge, *i. e.* the screw segments; and L, the length of the cleft when first commenced. It is obvious, that R, l, and L, vary with different kinds of stone, and are constant with each particular kind; whence, for want of experimental data, it is impossible at present to reduce these equations to figures. The friction, too, of the instrument increases in a greater ratio than the pressure, from the continually increasing difference between the threads of the conical male screw and those of the cylindrical female screw.

So far, it will be admitted, I have not slurred over the difficulties and disadvantages

to which the machine is exposed; but I have tried it, and the result of one experiment, at which the whole of the Commissioners of Public Works in this county, Mr. Vignoles, the engineer, of Liverpool, and Mr. John M'Mahon, of the firm of Henry Mullens & M'Mahon, were present, and expressed their entire satisfaction, will suffice.

Two men, with a lever of only *three feet in length*, and a single screw and segments of the size before described, split a mass of the argillaceous lime-stone of the county of Dublin, (*Calp* of Kirwan,) weighing nearly a ton, in 17 revolutions of the screw, made in about 25 or 30 sec. The men did not put forth their strength, but merely walked round the stone, which was split contrary to its stratification, and exactly in the line of separation of the segments. The sufficiency of the power is thus clearly shown.

Mr. John M'Mahon has informed me by note, that "he considers it a very great improvement in the art of quarrying."

This instrument is more particularly applicable to slate quarrying, and for the purpose of obtaining great tabular masses of granite, sienite, or other very hard and homogeneous rocks. In the former application, the saving of slate, and of labor in clearing the *face* of slate-rock of the accumulating rubbish shook down by the method of blasting, recommend it. In the latter, the saving of labor, the certainty of the direction of the fracture, and the capability of splitting larger blocks than have been as yet attempted by wedges. It may be also applied to raising stratified rocks from their beds, and as a substitute for blasting in general. The jumper holes usually used for the granite of this county are three inches in diameter, and sometimes *sixteen feet* deep. Each of these screws only requires a jumper hole of nine inches deep, and three inches diameter, and *no gunpowder*; and it is hardly questionable but that 20 of these screws, requiring *less* labor of preparation, would produce a greater effect than the one blast, besides producing it in a predetermined direction.

There is another advantage of these screws over blasting, that they are free from danger to the workmen employed in using them. There is but one way that I am aware of in which it is possible for them to fail, namely, by the threads of the screw splitting off; but the force required to strip a steel screw of one-fourth of an inch round thread, in depth and width, when twelve or fourteen threads are engaged at once, is enormous; and when a number of screws are in action on one mass of rock, the force on any individual screw need not be great.

The first cost of such screws is not very great. The male or conical screws, being of hardened steel, will last a long time; and the segments are cheaply made, when once the mould is prepared, as they wear out or are broken. The cost of jumpers is less than for blasting purposes, as they are so much shorter. It is obvious, also, that these screws may be applied at the bottom of a fissure or jumper hole, as well as near the surface of the rock, by having the head of the screw properly prolonged.

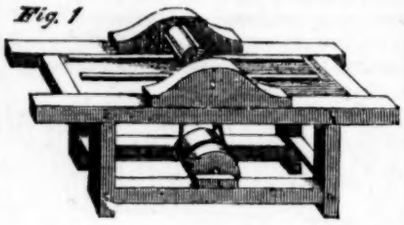
Oil and black lead should be used to lubricate the screw during its descent. If a cast iron segment should break in the hole during the descent of the screw, it does not matter, as the pieces are still held by friction in their relative situations. The saving in gunpowder and labor alone, in such a place as the Bangor slate quarries, would pay the cost of some thousands of these screws, should they be found to succeed, in a few months I should suppose.

Description of Tichenor's Patent Machinery for making Window Sash, Pannel Doors, Window Blinds, and Pannel Work generally. Communicated by the Proprietors, for the American Mechanics' Magazine.

For making window sash, &c. the plank is sawed up into proper lengths and widths by the use of circular saws, which are set on proper frames, for that purpose, the operation and construction of which are too generally known to need description.

The planing is done on a wooden frame, fig. 1, made of timbers four by five inches

Fig. 1



square, six feet long, two feet wide, and three feet high; on the top of this frame, which is a smooth surface, made so by plank laid level with the top of the plates, stands a circular cylinder, X, with cast steel knives or cutters, under which the stuff is passed to be planed while the cutters are in rapid motion. This cylinder may be raised or lowered at pleasure, to cut the thickness of the stuff to be planed. The small morticing is done in a small frame, fig. 2, two and a half feet

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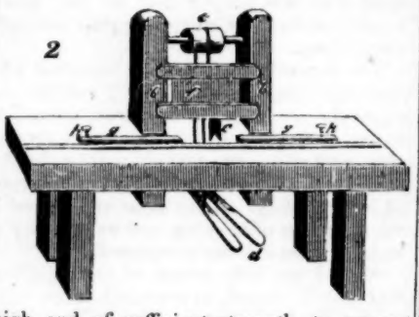

high, and of sufficient strength to support two upright standards or posts, *b*, in which grooves are made for a slide to move; in the slide are two chisels, *c*, set for making the small mortice after boring. This is done by two treadles or levers, *d*, which are moved by the foot, one to press it down, and the other to raise it up, by means of a cord, *e*, passing over a pulley, which is attached to the slide, *f*, containing the chisels. The stuff to be morticed is kept in its place by the gages, *g g*, which are fastened by screws, *h h*.

Fig. 3 represents a wooden frame of timber four inches by five inches square, eight feet long, six feet wide, and three feet high, to the top of the plates, with girts a sufficient height from the bottom to hang the drum-cranks, &c. on the frame. The following kind of work is done: the stuff, being planed, is taken to a small circular saw, *i*, set in motion on one end of the frame, and cut to an exact length by the aid of a wood slide gage, which can be set to any length, and can be screwed by set screws or keys. The next operation is tenoning: a small frame or gate, *k*, similar to a common saw gate, is

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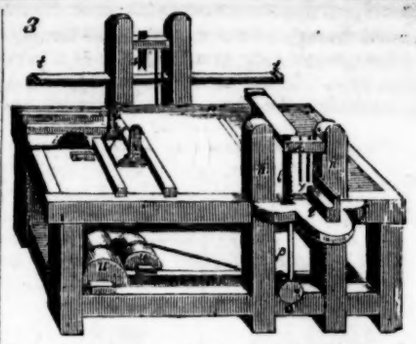

fixed on the side of the large frame: in the top of the small frame are set two chisels, *y*, of sufficient length for tenoning small stuff; there are two saws, *l*, hung in the same gate or frame, for tenoning larger stuff for doors, &c. one of which can be used for dove-tailing, with proper gages. In the same gate or frame is hung an instrument, called a coper, *m*, which is constructed of a flat piece of steel, secured on just far enough forward to serve as a gage for cutting the coping sufficient deep to form a correct fit to the moulding of the sash. The gate, or small frame, is hung within two perpendicular posts, *n n*, screwed on the side of the main frame, on which posts are fastened two bars of round iron, polished, and fitted for the gate to slide on; immediately under this gate, and on the lower girts of the main frame, hangs an eccentric wheel, *o*, to which a pitman, *p*, is attached, which connects with the gate or frame in which the saws, chisels and coper, hang, and when put in quick motion by a strap or gearing is a very expeditious mode of making tenons, &c. This is done by passing the stuff along by the wooden gage, *q*, under the chisels, *y*, or up to the saws, *l*, as fast as they cut clear; a screw gage is fixed to regulate the length of the tenons; when large tenons are made by the saws, the shoulders are cut by a small circular saw, *i*, hung for that purpose at one end of the main frame, over which the stuff is passed by a wooden gage, so as to gage it just deep enough, and moveable at pleasure.

The boring is done by a spoon-bill bit fitted in a small arbor, *r*, set in motion at either side of the main frame, and is kept in its place by slide gages. The morticing is done on the opposite side of the main frame from the tenoning, by chisels, *s*, set in a similar frame and driven by a crank; the chisels are set transversely or crosswise, in order to leave a relish as in a mortice made by hand; one or more holes are bored to start from. The stuff is kept true to its place by slides or gages. The morticing is completed by passing the stuff along under the chisels, the same as in tenoning; a gage, *t*, is hung out at each end to govern the exact length of the mortice. One of these machines has been in successful operation for upwards of six months at Ithaca, Tompkins county. One man and two boys make, on an average, twelve hundred lights, seven by nine and eight by ten window sash, per week with ease, making the cost of the labor, allowing liberal wages to the hands employed, less than one cent per light.

The proprietors, Messrs. W. & J. Woodward, of Ithaca, will give any information on the subject, and offer to sell rights for large or small districts of country. These machines are about to be erected in the following counties: Courtlandt, Tioga, Steuben, Cayuga, Oneida, Jefferson, Genesee, and Orleans.

[*From Verplanck's Discourses.*]

THE CHARACTERISTICS OF AMERICAN HISTORY.

It has not, like the history of the old world, the charm of classical or romantic associations, and it bends itself with difficulty and without grace, to the purposes of poetry and fiction. But in ethical instruction, in moral dignity, it has no equal.

The study of the history of most other nations fills the mind with sentiments not unlike those which the American traveller feels on entering the venerable and lofty cathedral of some proud old city of Europe. Its solemn grandeur, its vastness, its obscurity, strike awe to his heart. From the richly painted windows, filled with sacred emblems and strange antique forms, a dim religious light falls around. A thousand recollections of romance and poetry, and legendary story, come thronging in upon him. He is surrounded by the tombs of the mighty dead, rich with the labors of ancient art, and emblazoned with the pomp of heraldry.

What names does he read upon them? Those of princes and nobles, who are now remembered only for their vices; and of sovereigns, at whose death no tears were shed, and whose memories lived not an hour in the affections of their people. There, too, he sees other names, long familiar to him for their guilty or ambiguous fame. There rest the blood-stained soldier of fortune—the orator, who was ever the ready apologist of tyranny—great scholars, who were the pensioned flatterers of power—and poets, who profaned the high gift of genius, to pamper the vices of a corrupted court.

Our own history, on the contrary, like that poetical temple of fame reared by the imagination of Chaucer, and decorated by the taste of Pope, is almost exclusively dedicated to the memory of the truly great; or rather, like the Pantheon of Rome, it stands in calm and serene beauty amid the ruins of ancient magnificence and "the toys of modern state." Within, no idle ornament encumbers its bold simplicity. The pure light of heaven enters from above and sheds an equal and serene radiance around. As the eye wanders about its extent, it beholds the unadorned monuments of brave and good men who have greatly bled or toiled for their country, or it rests on votive tablets inscribed with the names of the blest benefactors of mankind.

Hic manus, ob patriam pugnando, volnera passi,
Quique sacerdotes casti, cum vita manebat,
Quique pii vates, et Phoebo digna locuti,
Inventas aut qui vitam excoluere per artes,
Quique sui memores, alios fecere merendo.

(*Translation.*)

Patriots are here, in Freedom's battles slain,
Priests, whose long lives were closed without a stain,
Bards worthy him who breathed the poet's mind,
Founders of arts that dignify mankind,
And lovers of our race, whose labors gave
Their names a memory that defies the grave.

VIRGIL—From the MS. of Bryant.

SOURCES OF NATIONAL PRIDE.

Doubtless, this is a subject upon which we may be justly proud. But there is another consideration, which, if it did not naturally arise of itself, would be pressed upon us by the taunts of European criticism.

What has this nation done to repay the world for the benefits we have received from others? We have been repeatedly told, and sometimes, too, in a tone of affected impartiality, that the highest praise which can fairly be given to the American mind, is that of possessing an enlightened selfishness; that if the philosophy and talents of this country, with all their effects, were for ever swept into oblivion, the loss would be felt only by ourselves; and that if to the accuracy of this general charge, the labors of Franklin present an illustrious, it is still but a solitary, exception.

The answer may be given, confidently and triumphantly. Without abandoning the fame of our eminent men, whom Europe has been slow and reluctant to honor, we would reply: that the intellectual power of this people has exerted itself in conformity to the general system of our institutions and manners; and therefore, that for the proof of its existence and the measure of its force, we must look not so much to the works of prominent individuals, as to the great aggregate results; and if Europe has hitherto been wilfully blind to the value of our example and the exploits of our sagacity, courage, invention, and freedom, the blame must rest with her, and not with America.

Is it nothing for the universal good of mankind to have carried into successful operation a system of self-government, uniting personal liberty, freedom of opinion, and equality of rights, with national power and dignity; such as had before existed only in the Utopian dreams of philosophers? Is it nothing, in moral science, to have anticipated in sober reality numerous plans of reform in civil and criminal jurisprudence, which are but now received as plausible theories by the politicians and economists of Europe? Is it nothing to have been able to call forth on every emergency, either in war or peace, a body of talents always equal to the difficulty? Is it nothing to have, in less than half a century, exceedingly improved the sciences of political economy, of law, and of medicine, with all their auxiliary branches; to have enriched human knowledge by the accumulation of a great mass of useful facts and observations, and to have augmented the power and the comforts of civilized man, by miracles of mechanical invention? Is it nothing to have given the world examples of disinterested patriotism, of political wisdom, of public virtue—of learning, eloquence, and valor—never exerted save for some praiseworthy end? It is sufficient to have briefly suggested these considerations; every mind would anticipate me in filling up the details.

No—Land of Liberty! thy children have no cause to blush for thee. What though the arts have reared few monuments among us, and scarce a trace of the Muse's footstep is found in the paths of our forests, or along the banks of our rivers; yet our soil has been consecrated by the blood of heroes, and by great and holy deeds of peace. Its wide extent has become one vast temple and hallowed asylum, sanctified by the prayers and blessings of the persecuted of every sect, and the wretched of all nations.

Land of Refuge—Land of Benedictions! Those prayers still arise, and they still are heard: "May peace be within thy walls, and plenteousness within thy palaces!" "May there be no decay, no leading into captivity, and no complaining in thy streets!" "May truth flourish out of the earth, and righteousness look down from Heaven!"

The following letter from the last number of the Turf Register, though addressed chiefly to Sportsmen, contains a description of the mounted Indians of the West, that is eminently graphic and picturesque:

Cantonment Jesup, Lou. July 15, 1832.

MR. EDITOR—The modern turf horse is said to be deficient in the powers of endurance and ability to carry weight, which were so eminently possessed by the immediate descendants of the Arabian, Barb and Turkish horses, which produced the unrivalled English stock. My object is to direct the attention of American breeders to a stock of horses possessing good wind, great powers of endurance, and hardy constitutions, with fine, bony, sinewy limbs. They are indigenous to our continent; and if the experiment I recommend, of crossing them with our bred horses, succeed, will preclude the necessity of recurring to the present race of horses in England, which is doubtless degenerate. I allude to the wild or prairie horse, inhabiting the southwest region of our continent, and roaming amid the immense grassy plains of that section, and to this race, partially tamed by the savage tribes of the country. No one who has seen the Osages galloping over their boundless prairies, under their fervid sun, and maintaining this gait for hours—viewed their muscular and handsome steeds, and compared his own jaded nag with the bounding and restless animals around him—but has confessed the superiority of their horses over ours. In July, 1829, the writer accompanied a party of gentlemen on a visit to Clermore's band of Osages, on the Verdigris river, a tributary of the Arkansas. A runner having been despatched to apprize them of our intention, upon arriving within two miles of the town we halted to await their welcome. In a moment they were in commotion, and the chiefs and principal warriors (in number about a hundred) mounted, and approaching at full speed; bearing lances, and shields, painted of various colors, and otherwise adorned; their heads surmounted with helmets of feathers and red and blue cloth; their arms and legs clasped by tinkling bands; some naked, with the exception of the breech-clout; others clothed in the favorite dress of the Indian, a blue frock, with red collar and cuffs; and another portion with only the painted blanket streaming from their shoulders; sounding their war cry, and advancing rapidly and tumultuously; rushing in among us to give a welcome, and then wheeling their horses on the vast surrounding plain, in mimic pursuit of each other. They presented a most joyous, novel, and splendid barbaric spectacle. Here it was that my admiration of their horses was first excited; for this was the first opportunity I had of viewing their *good* horses. Among them were three or four, evidently of the same family; on one of which Clermore himself rode. They were of a beautiful cream color, with black manes and tails; a dark stripe along the back, and dark or black legs from the knees down; not over fifteen hands in height, but of compact, stout frames. A mahogany bay, of this size and form, caught my eye, as possessing a most superior walk. One brave sported a Pawnee head dress, horse, and other spoils, taken in battle. The stallion was of a very dark and peculiar iron grey, tall and slender, but a most beautiful animal. There is now at Cantonment Gibson a wild mare, caught by the Osages when on a hunt. She is white, with a neck like a stallion; finely formed in every respect; of great length of body, and having remarkably fine limbs. Every attempt has been made to break her, but with indifferent success; she having thrown, at their imminent hazard, all her riders. She has produced a likely, but small, brown bay filly, by one of the worthless Cherokee ponies about the garrison. When we consider the firm elastic soil, excellent herbage, and fervid sun of the plains over which these horses roam—the question, what advantages in soil, climate or food, the desert or mountain Arabian horse possesses over them, naturally presents itself. They ought to possess, in an equal degree, the flinty hardness of limbs, speed, &c. of the Arabian. But one reason can be given for the superiority of the latter, (if they be in fact superior,) viz.: that the Arabs have been more careful in perpetuating a good strain and in suffering no inferior cross. But from the fact of the Osages prizing very highly their good horses, and the reluctance with which they part from them, together with my observing a particular family of horses among the chiefs, induce the conclusion that a peculiar breed exists among them; and I submit to sportsmen, whether an experiment, with a few of their stallions and mares, is unworthy a trial. Assuredly there are in our country gentlemen of fortune, enterprize, and patriotism enough, to make the experiment; and though the *immediate* cross with the blood horse should not evince speed enough to make first rate turf horses, yet their stamina would, by judicious crossing, produce those fine saddle and draft horses which a late writer (Mason) asserts the Virginia turf horse of the present day rarely produces. Should the experiment be made, (and there are so many mares and stallions of every degree of excellence and blood, in Virginia and Kentucky especially, that it might be conducted without bearing too onerously upon an individual sportsman,) it should not be abandoned in despair, though the first or second cross should not equal expectation. When we recollect the perseverance, repeated trials, and number of years, devoted by a Duke of Cumberland, before he succeeded in obtaining a superior stock of horses; and the pertinacity of an Earl of Oxford, in establishing the truth of a theory, by continuing a cross (of greyhounds) to the *eighth* remove, ere he attained the degree of perfection anticipated, we should be incited to attempt and continue our experiments. In order, Mr. Editor, that breeders may know what facilities they would meet with, and be enabled to form some idea of the expense they would have to incur, I will state the most expeditious mode, and best season, for reaching the country of the Osages.—From January to June the Arkansas has water enough for the steamboats which ply from the mouth of White river and New Orleans to ascend to Cantonment Gibson. This post is, by water, about six hundred and fifty miles from the Mississippi; by land, about three hundred and fifty. Clermore's village is distant from it fifty-five miles. Forty miles from the garrison is the residence of their trader, Col. A. P. Choteau, of St. Louis; a gentleman whose predilection for the sports of the turf would induce him to exert his great influence to persuade the chiefs to part with their best horses. I cannot, at this moment, refer to the Indian laws; but think they prohibit any purchase from the tribes without the sanction of their agents. The agent of the Osages is Mr. Humtramck, who resides at White Hair's town, situated on the Osage river, a tributary of the Missouri. But, upon application, doubtless the President or Secretary of War would authorize an attempt at purchase.

A SUBSCRIBER.

A discovery, not more extraordinary than useful, is communicated in a late number of the *Journal de Smyrne*, by which any kind of fire can be extinguished. Its truth has been tested by the Agricultural Society of Brunn; and they have pronounced it completely successful. It consists of *chopped straw*, which, thrown upon ignited grease, pitch, or spirits of wine, whole straw, wood, paper, sheafs of wheat, and even faggots, immediately extinguishes them, either separately or together—the chopped straw remaining itself perfectly unburnt. Several other experiments were tried, and were uniformly attended with the same success. It is necessary to throw it on the flames with some force, and, if practicable, to stir it afterwards.

[*From the Correspondent of the Portland Daily Advertiser.*]

THINGS ON THE MISSISSIPPI AND OHIO.

LOUISVILLE, (KY.) MAY 8, 1833.—Go with me to New Orleans full of mosquitoes, haunting you by day and assaulting you with their poisonous sting by night, so that you are glad to escape at early evening to your bed under your mosquito net, where you can read and think in peace—to New Orleans, now in full summer, teeming with the rich fruits of earth,—and follow me yet longer, if you have patience, on this long voyage to another region, another people, another climate, where I again meet spring, and the strong bracing air of New England.

I have said nothing of the rich plantations on both banks of the Mississippi above New Orleans,—nothing of the fine rich looking houses of all models and all colors, as erected by the taste of a Spaniard, a Frenchman, or an American,—but, nevertheless, such houses and plantations are on the levee of the Mississippi for miles above New Orleans, adorning the river, and variegating the prospect,—sometimes seeming like whole villages, as the neatly painted negro huts cluster around the palace of the master,—and sometimes like dilapidated towns, which negligence has left to ruin. These are chiefly rich sugar plantations, on the finest lands in the world, extending into the interior but a short distance where is almost an interminable swamp,—but rich where it is good, and all formed from deposits of the Mississippi, which, like the Nile, fertilizes its banks.

But there is soon an end to this display of a rich country and fine houses. Houses soon appear further and further off, and look poorer and poorer. At last the embankment ceases, or nearly ceases—and then is seen a swamp with its cypresses, spotted only here and there by the hut of a daring wood cutter, who supplies the steamboats with fuel,—or bluffs appear, bluffs or hills of all shapes, from the curved to the ragged or rent parallelogram. We passed Donaldsonville in the night. Baton Rouge was seen at advantage by daylight, with the neatly built Arsenal just above the town. We stopped at Natchez awhile, which time I improved in ascending a high bluff through deep mud, expecting to see nothing sufficient to compensate for my trouble, when at once a beautiful little city broke in upon the view, Natchez itself, with elegant houses, handsome streets, and well bordered with the China tree. I looked into the squares and gardens, which were then flourishing in all their glory: as elegantly clad ladies were in the principal street as one will see in Broadway. I regretted that I could not tarry longer to see this city of Mississippi, a State which I skirt in my travels, but of which one can see but little in a steamboat.

That part of Natchez under the hill, a small part, the port as it were, is filthy and uninviting. There was loud conversation on the subject of the Cholera. It seems that Natchez is a port where slaves are brought and sold, so as to avoid the law of Louisiana, and from thence are introduced into Louisiana. A slave trader brought a hundred slaves there for sale, many of whom had, after their arrival, died of the Cholera, and these the driver had carelessly thrown into a ditch, half covering their bodies with dirt, so that the first rain brought them forth to the horror of the inhabitants. The excitement was great, and I hope sufficient to drive these venders of souls and bodies further off, to pursue elsewhere their accursed traffic.

Of Arkansaw, on the left bank of the Mississippi, we saw nothing but its forests, its cane brakes so thick as to be almost impervious to light, and the cabins of its wood cutters, who were "squatting" on the lands of the government, and selling wood at $2 50 cents per cord, disdaining to cultivate the soil, when by levelling the huge trees on the banks, they could thus easily put money into their pockets.—Somewhere in Arkansaw, while our steamboat was "wooding," I strayed off a little, and found near a log cabin two Indians hideously painted, as in their days of war and glory, now beastly drunk with whiskey, and revelling in all the extravagancies of intoxication.

Our voyage from Vicksburg, where we stopped in the night, to Memphis, in Tennessee, was uninviting and unvaried, but by the passing of the flat boats and the steamboats for New Orleans and Red River,—or the occasional soundings which we made in crossing a sand bar. "A quarter less twain," "no bottom," "mark above water twain," or the like, were the chief sounds that saluted our ears,—while forest, forest, forest, with the huts of the wood cutters, were all we could see on the shores.

Memphis is on a bluff or hill. It is a small neat looking place, with a few brick buildings. We drifted on the current as our small boat or yawl put off to take in boat stores. Memphis seems to the voyager on the Mississippi like a refreshing port, when he has once more come in sight of land, after being long upon the waters. We left there at evening. After a copious shower of rain, with the thunder of the South, not of New England, the bright moon looked forth in its full radiance, and we journeyed up the strongly opposing current, in high spirits and good fellowship—passing in our steamer the Senator, the Farmer, and the Red Rover, all full of Cholera, as I was informed.

It was on Saturday evening that we left New Orleans. The next Saturday morning, early, we were near the mouth of the Ohio, in the light silver waters of the river, on the right bank of the Mississippi, long before we approached its mouth; for, as the two streams meet, it is long before they unite, the Ohio keeping its peculiar tinge and the Mississippi its turbid yellow color, for ten or twelve miles. About this time our mosquitoes had nearly left us. The climate was different; the season less advanced; the scenery on the banks of the river more undulating, and more varied. On entering the mouth of the beautiful river, ("*la belle riviere*," well called by the French,) I felt like the sailor who on a long voyage has caught a glimpse of the shore, yet we were 450 miles from Louisville. The country was, however, more inviting. We were out of the low country. We were free from mosquitoes, from swamps and morasses—but yet we had indeed a voyage to make before reaching Pittsburg or Cincinnati.

An indefinable sensation of satisfaction, delight and beauty, comes over one, as he sails up this river, and notices its graceful curves, and sloping banks now alive with vegetation, and covered with the ash, the oak, cotton wood and cypress. There is a calmness, quietude, and unobtrusive simple grandeur, that lulls the senses into contentment, and even draws the eye and opens the applauding mouth of him who has no soul for nature. The current is calm and unruffled. All is as quiet as when the first adventurous party first sailed from the upper waters on their adventurous voyage—they hardly knew whither. Occasionally the banks are broken by rocks. At times, but seldom, a precipice is to be seen; but, generally speaking, there is a sloping woodland of mighty trees, beautiful, but yet awing,—alluring, but impressive.

We passed by many villages on the banks of the Ohio—villages or towns in Kentucky, in Illinois and Indiana. We landed at a few, and passed others in the night. Paducah, Ky., is a rapidly growing village. Shawneetown, in Illinois, on the spot of an old Shawnese settlement, is a place of some importance. But I am not writing a geography, nor a book of travels.

SOUTHERN SCENERY.—Those who have been in the habit of traversing our Southern woods, have, no doubt, been frequently struck by that sudden transition, within the compass of a few miles, from scenery of one description to others of an entirely different character, which, beyond almost any other feature, may be said to characterize the dense solitudes of Carolina. The effect of this sudden and unexpected transition is one always of inexpressible charm.

After a ride or walk of several hours, through woods wholly impervious to the sun, and literally walling the traveller in, so as to allow just space enough for his horse,—wading through deep and dangerous swamps, reedy brakes, and a world of briars, through which he has to fight his way,—the hunter or lover of nature, who woos her in her most secret recesses, finds himself all at once, and as if by magic, treading the smooth and verdant carpet of some upland lawn, with trees in regular array, as fashioned by the hand of art; and interspersed with lights and shadows, and soft and beautiful knots, inviting you to repose; and, reigning over all this, silence the most profound—broken at intervals by the solitary note of the Red Bird or sound of the Woodpecker.—[Charleston Mercury.]

THE COTTON TRADE.—In France, in 1831, the cotton spun was 74,000,000 lbs. besides the British yarn smuggled through Flanders. In Alsace, power looms are incressing fast. Average wages of spinners, 5s. 8d.; hours of labor 12 to 14 hours. In Switzerland, in 1831, the cotton spun was 18,816,000 lbs.: No. 40 costs 14 1-2d. when cotton is 8d. 3-5ths, wages, 4s. 5d.; wages in similar mills in Britain, 8s. 4d. In the Prussian and Rhenish Provinces, in 1830, the cotton spun was 7,000,000 lbs. Power looms have been profitably introduced. In Saxony cotton spinning is just commencing, and fast augmenting; in 1831 there was spun 1,200,000 lbs. of cotton; average wages, 3s. 6d. They spin as cheap as the British as high as No. 50 warp, and No. 80 weft. In Lombardy, in 1831, the cotton spun was 4,000,000 lbs. In Austria it is fast advancing: in 1831, 12,000,000 lbs.; average wages, 3s. 9d. In India the new mill, 12 miles above Calcutta, works every day, 91 hours in the week. The spinner managing one mule earns 1s. 9d.; his piecers (three in number) 9d. to 1s. each. No. 20 to No. 40. In the United States, in 1831, the cotton spun was 77,550,000 lbs.

MEXICAN CARAVANS.—We have inquired of a Mexican gentleman, whether the regular *conducta de platas* (money caravan) for Vera Cruz is now restored: he answered in the affirmative, and that it sets out monthly; but in extraordinary cases, where foreign or native merchants solicit *extra* convoys, the government sometimes complies, sometimes refuses.

The roads are not yet Macadamized over the mountains of Mexico; the advantage of wheel carriages is little known, and all is carried a-mule-back in gauged loads, (cargas,) well packed directed by *arrieros*, or, as the Scotch would say, cadgers (carriers.) Before the revolution, which interrupted "extraction from the mines," and transmission of cargas of vanilla, silver, &c. &c. forty nine thousand mules used to leave Mexico in a single conducta for Vera Cruz, with an escort of four thousand troops. No wonder that tourists have left us such pictures of the caravan; the harnessed mules (from custom) stopped with their *aparejos* for their load: in their descent of steep places, sliding on their posteriors; the authoritative tone of the guides, the magisterial din, or significant silence of the military escort.—[New Orleans Bulletin.]

[This celebrated song is printed in several collections of Poems published in the sixteenth century. There are many variations in each of the copies. The following version is that given by Ritson, in his "English Songs," with the exception of the last stanza, which is from a MS. in the Bodleian Library at Oxford. In that manuscript the Poem is ascribed to Sir Edward Dyer, a friend of Sir Philip Sydney.]

My mind to me a kingdom is;
Such perfect joy therein I find,
As far exceeds all earthly bliss,
That God or Nature hath assign'd;
Though much I want that most would have,
Yet still my mind forbids to crave.

Content I live, this is my stay;
I seek no more than may suffice;
I press to bear no haughty sway;
Look what I lack, my mind supplies;
Lo! thus I triumph like a king,
Content with that my mind doth bring.

I see how plenty surfeits oft,
And hasty climbers soonest fall;
I see that such as sit aloft
Mishap doth threaten most of all:
These get with toil, and keep with fear;
Such cares my mind could never bear.

No princely pomp nor wealthy store,
No force to win a victory;
No wily wit to salve a sore,
No shape to win a lover's eye;
To none of these I yield as thrall;
For why? my mind despiseth all.

Some have too much, yet still they crave,
I little have, yet seek no more;
They are but poor, though much they have,
And I am rich with little store.
They poor, I rich; they beg, I give;
They lack, I lend; they pine, I live.

I laugh not at another's loss,
I grudge not at another's gain;
No worldly wave my mind can toss,
I brook that is another's bane:
I fear no foe, nor fawn on friend—
I loath not life, nor dread mine end.

My wealth is health and perfect ease,
My conscience clear my chief defence;
I never seek by bribes to please,
Nor by desert to give offence.
Thus do I live, thus will I die—
Would all do so as well as I.

I joy not in no earthly bliss,
I weigh not Cœsus' wealth a straw;
For care, I care not what it is—
I fear not fortune's fatal law:
My mind is such as may not move
For beauty bright, or force of love.

I wish but what I have at will,
I wander not to seek for more;
I like the plain, I climb no hill;
In greatest storms I sit on shore,
And laugh at them that toil in vain
To get what must be lost again.

I kiss not where I wish to kill,
I feign not love where most I hate;
I break no sleep to win my will,
I wait not at the mighty's gate;
I scorn no poor, I fear no rich—
I feel no want, nor have too much.

Some weigh their pleasures by their lust,
Their wisdom by their rage of will;
Their treasure is their only trust,
A cloaked craft their store of skill;
But all the pleasure that I find,
Is to maintain a quiet mind.